## THE CITY OF AKHENATEN

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## PART III

# THE CENTRAL CITY AND THE OFFICIAL QUARTERS

THE EXCAVATIONS AT TELL EL-AMARNA
DURING THE SEASONS
1926-1927 AND 1931-1936

J. D. S. PENDLEBURY

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FORTY-FOURTH MEMOIR OF
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#### PREFACE

THE first memoir, City of Akhenaten, I, described the work of 1921 and 1922 carried out by Messrs. Peet and Woolley in the South City, Maru-aten, the River Temple, the Workmen's Village, and the Tomb Chapels. City of Akhenaten, II, described the North Suburb and the Desert Altars, excavated between 1926 and 1931 by Messrs. Frankfort and Pendlebury. The present memoir is concerned with the Official Quarters in the Central City, first partially explored by Petrie in 1891, further excavated by Frankfort in 1926, and completed between 1931 and 1936 by the writer. Preliminary reports have been published in JEA. XIII and XVIII—XXII, as well as in Petrie's Tell el Amarna.

In 1891 the late Professor Sir Flinders Petrie worked on parts of the Palace, the Royal Estate, and the Records Office area. Under his supervision Mr. Howard Carter partially cleared the Sanctuary of the Great Temple. By no means all the objects found were published in *Tell el Amarna*. In Chapter XI of the present memoir Mrs. Samson deals with those at University College and Mrs. L. Murray Thriepland adds a note on an offering-table.

In 1926 Dr. H. Frankfort made further progress with the Sanctuary and cleared the Hall of Foreign Tribute, the Official House of Panehsy and another small building close to the Temple.

In 1931–2, after a change in directorship, the Royal Estate was cleared. In 1932–3 Per-ḥai and Gem-Aten in the Great Temple as well as a good deal of the Magazine Area to the south were excavated. In 1933–4 the Sanctuary of the Great Temple was finally dug, and a building to the north as well as the Records Office and its surroundings, the Police Barracks, and part of the Military Quarter were cleared. In 1934–5 work was begun on the Palace; the Harem, Weben-Aten, and part of the Broad Hall being attacked. In 1935–6 the Palace was practically completed. In 1936–7 the final work on the Palace was done, the rest of the Buildings immediately south of the Great Temple were cleared and the rest of the Military Quarters as well as the South-east Quarter was excavated.

All those whose names appear below have contributed something towards the solution of the various problems. It is seldom, so thoroughly did they identify themselves with the work, that it is possible to recall the author of any particular suggestion. Special mention, however, must be made of Mr. Lavers's work both on the Great Temple and the Palace. The surprising and convincing results he achieved from such very scanty remains are fittingly recorded in the plans and reconstructions of some of the largest and most imposing buildings of Ancient Egypt. Mr. Fairman's work also, particularly on the Small Temple, must be mentioned as well as his collation of all the inscriptions, not only those dealt with by him during the years he was in the field, but also those originally recorded by Mr. Glanville in 1926–7, Mrs. Pendlebury in 1933–4, and Miss Drower in 1936. Dr. Frankfort's enthusiasm for the site did not wane with his departure, and one at least of the writers wishes to pay a tribute to his help.

Nor must we forget the workmen to whose skill we owe so many of our results. Space allows us to mention only the foremen, and to the Head Reis [the late] Umbarak Mohammed Salim el-Bedawi, and Reises Ali Mohammed Sherraif, Hussein Sawag, Maḥmud Umbarak, and Hassan

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Sherraif every credit is due for their adaptability to a type of excavation of which they had previously had no experience.

Among those not directly connected with the excavation we must thank the Secretaries of the Society, Miss M. C. Jonas and Miss W. A. Keeves, for much uncomplaining help, Mr. O. H. Myers for much assistance in the chapter of analyses, Professors Glanville and Černý for permission to publish the objects in Chapter XI, Miss Moneycoutts for the laborious task of inscribing the numbers on the photographs of objects, and the Press for their usual courtesy and assistance.

The expenses of excavation and publication have been met by many generous donors. Mrs. Hubbard has for many years continued her support. The Brooklyn Museum made large donations for the final four seasons, the Brussels Museum for the last two. These were due to the advice of [the late] Professor Jean Capart of Brussels to whom we were able to show some of our appreciation during his stay in camp in 1934. For the last two seasons we received subscriptions from the Boston Museum of Fine Art for which we wish to thank the efforts of [the late] Dr. Reisner, Mr. Dows Dunham, and Miss Eaton, the latter two of whom we had the pleasure of entertaining in the field. Other regular subscribers have been the Ashmolean Museum, Oxford, the Fitzwilliam Museum, Cambridge, and Mr. C. W. Dyson Perrins. The legacy left by Miss Scripps has meant a regular source of income from the San Diego Museum. The Schweich Fund made a generous donation, and many private subscribers have shown their continued interest in our work. All we can say in thanks is that we hope they are all satisfied, the museums with the objects which have been allotted to them, the individual donors with the presentation of the results of our labours which would have been impossible without their help.

The thanks of the Society are also due to the members of the Service des Antiquités who have many times gone out of their way to help us and whose courtesy and kindness has been unfailing. Mention must also be made of the assistance received from the Royal Egyptian Air Force, whose photographs appear here by courtesy of the Ministry of National Defence, and from the R.A.F., whose photographs, taken by No. 45 Squadron, are also published here.

#### MEMBERS OF THE STAFF IN THE FIELD

C. O. Brasch, 1932/3, 1933/4, 1934/5.

MISS M. CHUBB, 1931/2.

Р. Снивв, 1932/3.

H. B. CLARK (Architect), 1926/7.

MISS M. DROWER, 1936/7.

H. W. FAIRMAN, 1931/2, 1932/3, 1934/5, 1935/6.

H. FRANKFORT (Director), 1926/7.

Mrs. Frankfort, 1926/7.

S. R. K. GLANVILLE, 1926/7.

R. S. LAVERS (Architect), 1931/2, 1932/3, 1933/4, 1934/5, 1935/6, 1936/7. Mrs. Pendlebury, 1931/2, 1933/4, 1934/5.

J. D. S. Pendlebury (Director), 1931/2, 1932/3, 1933/4, 1934/5, 1935/6, 1936/7.

G. RUDNITZKY, 1935/6.

Mrs. Sherman, 1934/5.

S. R. SHERMAN, 1931/2, 1932/3, 1933/4, 1934/5.

T. W. THACKER, 1935/6.

H. W. WADDINGTON (Architect), 1931/2, 1932/3.

Mrs. Waddington, 1932/3.

[Mr. Pendlebury was killed in Crete on 22 May 1941. The task of revising his manuscript, which was completed in 1939, and of editing this memoir was entrusted to Professor H. W. Fairman. Every effort has been exerted to make the fewest possible alterations to Mr. Pendle-

PREFACE ix

bury's text, but some changes have been unavoidable: some minor corrections and alterations were essential, references have been inserted, where appropriate, to material published since 1939, a few minor statements have been modified to conform with such new evidence, and it has been necessary to insert a few entirely new passages for the sake of continuity or for the convenience of the reader. All such editorial modifications or additions to the text and footnotes of the chapters written by Mr. Pendlebury have been printed in square brackets []. With these exceptions, therefore, the text and the opinions expressed in this memoir are Mr. Pendlebury's, and no statement known to conflict with views held by him at the time of his death has been inserted, not even in the few instances, such as the situation of the main Window of Appearance in the Official Palace, in which the editor feels that alternative suggestions are probable or worthy of consideration. Mr. Pendlebury had no opportunity of studying in detail Chapter X and its conclusions before his death.

In certain details this memoir differs from the scheme originally drafted by Mr. Pendlebury. It appears to have been his original intention to include a chapter on architecture and building methods. No draft of such a chapter, nor any notes in preparation for it, have been found, and it is possible that he changed his mind. Mr. Pendlebury had also planned and prepared an elaborate series of indexes, including a General Index to City of Akhenaten, I, indexes of materials, objects and photographs of them, and of buildings, architectural plans and photographs in this and the two previous memoirs, in addition to an appendix of references to the text from the plates in City of Akhenaten, Parts I and II. Owing to the greatly increased cost of printing, all these have had to be omitted. The General Index and Index of Egyptian Words printed in the present memoir have been prepared by the editor.

It is regretted that, for reasons beyond the control of the Egypt Exploration Society, Mr. Lavers has been unable to complete the revision of some of his plans and drawings. The most serious loss is in our Plate XVI, which was originally printed in JEA. XVIII, Pl. XVI. On the whole, this plan is still accurate, but our later experience in the Great Temple showed that the plan of the Sanctuary of Ḥat-Aten should be modified considerably. The reader of Mr. Pendlebury's account of the Sanctuary should ignore Pl. XVI, and refer to Pl. XVII and to Fig. 18 in which an attempt is made to remedy this deficiency. There are also certain discrepancies between Mr. Pendlebury's description of the Great Palace and Pls. XIII A, B, and c on the one hand, and the restored plan in Pl. XIV on the other: in such cases Pl. XIV is to be ignored and footnotes supply the necessary corrective. Finally, there are certain trifling errors in the reconstructions, e.g. the flags, and the roofing blocks of Per-ḥai, which though in no way affecting the general accuracy or plausibility of Mr. Lavers's reconstructions, might perhaps offend the purist: rather than delay the appearance of this memoir indefinitely, we have chosen to print these plates with these quite unimportant errors uncorrected.

Pls. IX and XI and Figs. 5 and 6 are the work of Mr. H. B. Clark. With the exception of Fig. 18, all other architectural plans, drawings, and reconstructions are due to Mr. Lavers, who also made the drawings of sealing types in Pl. LXXXIII and drew the coffinette, but not the inscriptions, in Pl. CIV. Pl. CXII and Figs. 8–11 and 13 are the work of various members of the staff, particularly Mrs. Pendlebury and Mr. S. R. Sherman.]

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## THE CITY OF AKHENATEN

## PART III

#### CHAPTER I

#### INTRODUCTION. THE CENTRAL CITY

In the great new capital of Akhet-Aten founded with such high hopes by the Heretic King no quarter contained buildings of vaster dimensions or more ambitious appearance than that to be described in the following pages. The Central City, as we may term this quarter in contradistinction to the Northern Suburb lying immediately to its north and to the "South City" situated immediately to its south, covers squares O-T and 38-43 in the general map of the site, and therefore measures roughly 1,200 metres each way. For a plan of the entire area see Pl. I; it is bounded to the north and south by wâdis; to the east by a distinct dip in the level of the desert; to the west, as we shall see below, lay the Palace, which extended practically the entire length of that side and probably ran down to the river.

The main thoroughfare was the Sikket es-Sultân, as it is called to-day. This highway—its name is translated "Royal Road" in the plan—was probably in use for centuries before Akhet-Aten was built as the main road to the north on the east bank of the river, and now, centuries after the desertion of the city, it is still in use, particularly for the droves of camels brought down from the Sudan to Cairo, legitimately brought that is, for stolen camels still use the Darb el-Harâmi or Robbers' Gorge some fifteen or twenty miles up in the high desert which comes out opposite Minia. The Sikket es-Sultân emerges into the plain by the southern boundary stelae, passes Maru-Aten and in the South City serves the important houses of which that of the Vizier Nakht alone has been excavated. It runs between the Palace and the Royal Estate, being crossed by a bridge which connects the two. It then broadens out into an open square opposite the entrance to the Great Temple. Its course can be traced as one of the main streets of the modern village of Et-Till and farther at intervals in the modern cultivation, whence it emerges for a few hundred yards to serve the North Palace. It finally leaves the cultivation to run between the massive wall which bounds "Nefertiti's Palace" (?) and the large houses of the North City. Finally, it serves the "Customs House" at the extreme north end of the site and again becomes a mere rocky path between the north cliffs and the river, leading towards Sheikh Said and El-Bersha. Next in importance is the continuation of the road known in the South City as High Priest Street. This runs along the east side of the Royal Estate, serving the area

<sup>&</sup>lt;sup>1</sup> For the explanation of these squares see City of Akhenaten, I, p. 3. The "South City" was the principal subject of op. cit., vol. I, the Northern Suburb that of op. cit., vol. II. The position of the Central City relative to the neighbouring quarters may be seen in the map op. cit. I, Pl. I; cf. also JEA. XIII, Pl. XLIV, a plan of the northern portion of the city which overlaps our Pl. I, and shows the squares designated by the letters P-Z and the numbers 22-41. [In addition to our Pl. I, a simplified but more modern plan of the Central City, with more accurate naming of the buildings it has been possible to identify, will be found in The Town Planning Review, XX (April 1949), Fig. 15.]

of the Records Office until it is blocked by the Magazines. Farther east again smaller roads divide the Military and Police Quarters and emerge into the large open space south of the Temple. Finally, there is a distinct track between the official residence of Panehsy at the southeast corner of the Great Temple and his private house which is at the north-east corner of the South City. It is strange to think that such a path, made by the wheels of his chariot, the hooves of his horses, and the feet of his running footmen, should have survived on the rough desert surface in spite of the weather of over 3,000 years. No doubt a road ran along the riverbank to serve the Royal Dockyard, but of this no trace is now visible.<sup>1</sup>

The principal east—west streets are as follows. One runs between the Small Temple, Hat-Aten, and the King's House, thus dividing the Royal Estate, and separates the area of the Records Office from that of the Clerks' Houses to the south. It leads to what may have been Army Headquarters. To the north of the Royal Estate runs a second street which serves the Magazine area and runs to a great artificial depression in the ground just north of the Police Barracks. At its western end it emerges into the Sikket es-Sulțân just opposite one of the entrances to the Palace and most probably it is the street along which was taken the sand obtained from the depression to be used for scaffolding and filling in the construction of the State Halls of the Palace. Other minor streets run on either side of the Temple Magazines to the open space south of the Great Temple itself.

#### Quarters of the Central City

The Central City (Pls. I, II, XXIV) falls naturally into a series of blocks divided by the roads described above. Of most we can determine the function, if not the name, by which they were known. The letters T, P, R, E, &c., after each section are the key letters of the block to which each building is referred in the index.

- I. At the north end lies the *Great Temple*, its temenos wall enclosing an area of 800 metres by 300. Little of this area is occupied by buildings. It is described in Chapter II, pages 5 ff. Outside the south wall and near its east end is a dump of stone from the destruction of the Temple (p. 11). T.
- II. With this must be taken its *Dependencies* described in Ch. III. The Hall of Foreign Tribute (p. 22), the Official House of Panehsy (p. 26), the Overseer's House, T. 39. 1 (p. 25), the large building, S. 39. 1, lying partly under the modern cemetery (p. 21), the Baths (?), S. 40. 1, to the south (p. 28), and the long rows of Magazines (p. 30). T.D.
- III. Extending along most of the west end of the Central City is the *Palace*, some 600 metres long by, apparently, some 300 across (Ch. IV, pp. 33 ff.). At its south end is a pair of pavilions, O. 42. 1 and 2 (p. 81). At its north end was a sculptor's studio (p. 80). P.
- IV. Connected with the last by a bridge over the Sikket es-Sulţân is the Royal Estate (Ch. V, pp. 86 ff.), consisting of the King's Private House (p. 87), the Royal Magazines (p. 89), the Small Temple (pp. 92 ff.), and the Priests' Quarters (pp. 100, 101). R.E.
- V. Between the last and the Magazines of the Great Temple are other *Magazines* (Ch. VI, pp. 106 ff.) which are divided into two divisions by High Priest Street. M.
- VI. East of the Royal Estate lie the Records Office and its surroundings (Ch. VII, pp. 113 ff.). This is a big group of Government Offices which includes the Records Office itself

<sup>&</sup>lt;sup>1</sup> See Davies, Amarna, V, Pl. V. The Tomb of May.

- (p. 113), the "House of Life" (University?) (p. 115), and other buildings. With it are connected the rows of "County Council" houses to the south (p. 122) which we suggest housed the Government Clerks. R.O.
- VII. At the extreme eastern edge of the city lie the *Military and Police Quarters* (Ch. VIII, p. 131). The former (p. 131) is a large L-shaped block, the latter (p. 132) has no direct connexion with it but projects eastwards and commands both a clear view of most of the plain and a clear run for the chariots to a point opposite any scene of disturbance. M.P.
- VIII. At the south end of the last are a few unusual buildings which we have simply called the South-Eastern Quarter (Ch. IX, p. 139). These comprise a large private house, R. 43. 1 (p. 139), a gaily painted Pavilion (p. 139), a small house, R. 43. 3 (p. 142), and a curious building apparently intended to house a statue of the king (R. 43. 2) (p. 140). Between these structures and the Police Quarters lie the waste heaps (p. 142) already explored by Petrie. S.E.

#### Chronology

As to the order in which the various quarters were built or deserted we have been able to gain a fair idea from the inscriptions, the carved stone-work often giving the name of the Aten, which changed its form in the ninth year of Akhenaten's reign, from the ostraca or rather potsherds inscribed with the date on which the vase from which they came was sealed, from bricks stamped with the name of Akhenaten or Smenkhkarë, and from other objects bearing royal names.

From such evidence it appears that the first structure to be set up was the brick altar or chapel in the Great Temple to which access was obtained by an avenue of trees and sphinxes (p. 5). Simultaneously, no doubt, work was begun on the Royal Estate. Next comes the building of the temenos wall of the Great Temple and the construction of the Sanctuary which replaced the old brick chapel. At the same time the Palace is begun. All this falls between the sixth and ninth years of Akhenaten's reign. After year 9 Per-ḥai and Gem-Aten are built in the Great Temple and the State Halls of the Palace are completed. That this latter building was never quite finished is evident from the remains of two pavilions (p. 59), the columns of one being still only roughly blocked and the foundations of the other not yet finally marked out.

Last of all, probably about year 15, comes the huge pillared hall at the south end of the Palace (p. 60) which we suggest was built as a Coronation Hall for the crowning of Smenkh-karē as Akhenaten's co-regent.

The presence of many objects bearing the name of Tutankhaten (sometimes Tutankhamun) and 'Ankhesenpaaten shows that the desertion of the site did not take place until their reign. Indeed, the third year, which is the latest date which can be assigned to his reign at Amarna, seems the safest date for this event.<sup>2</sup>

It is interesting to note that just as the private individuals bricked up the doors of their

<sup>&</sup>lt;sup>1</sup> Petrie, Tell el Amarna, p. 15.

<sup>&</sup>lt;sup>2</sup> Cf. Griffith in Petrie, *Tell el Amarna*, p. 32, where it is pointed out that year 3 could not refer to Akhenaten, who did not get to Amarna before his sixth year. Nor is it likely to refer to Smenkhkarē<sup>c</sup>, who was in Thebes by his third year, see Newberry, *JEA*. XIV. 3 ff. [See also p. 158 below.]

houses, uncertain as to whether they would return, so, too, there must have been some doubt in responsible Government circles as to whether the next turn of the wheel would not see Akhet-Aten again occupied; at all events, not only were the archives left in the Records Office, but the doors of many of the official buildings were blocked.

It is probably to Haremhab that we can assign the thorough devastation of the site. How bitter was his hatred of Akhenaten and all that he and his new religion stood for can be seen in the ruthless destruction of the stone-work in the Temple and Palace. This is not the result of mere chance breakages by gangs of workmen quarrying the buildings for cut stone, nor of casual wanton damage done by a navvy with a sledge-hammer. It is the work of parties of skilled masons with orders to destroy every trace of "that criminal", a task which they carried out only too thoroughly.

Whether as a symbol of the final conquest of the heresy or not we do not know, but the presence of a sculptured slab and of a statue-base bearing Ḥaremḥab's name implies that he set up a monument of some sort, perhaps a chapel of Amūn on the site of the Great Temple.

In this part of the city, as in every other part yet excavated, there is a complete lack of any evidence whatsoever of a previous settlement.<sup>2</sup> The discovery of an earlier building below one of the Clerks' Houses (p. 122) was fortunately balanced by the fact that its bricks were inscribed with the name of Akhenaten (pp. 122, 151). Of later occupation likewise there was no trace beyond a single scarab of Ramesses II found in the debris of the Weben-Aten where it had obviously been dropped by a traveller. A few late Roman burials of the same date as those described in City of Akhenaten, II, pp. 66 f. were found in various buildings, but otherwise this area has remained free of human settlement since the day it was deserted, for only the smallest traces of "squatters" walls were found.<sup>3</sup>

As in the previous Memoir, the plans and photographs will be left as far as possible to speak for themselves. Each division of this part of the site will be taken in order. First each building, then the important objects from it, and, finally, an appendix of the unimportant objects, and rings, moulds, amulets, and pottery. The serial numbers of the objects are preceded by the season in which they were found, i.e. 32/103 = Card index of season 1932–3, No. 103.

[The hieratic and hieroglyphic inscriptions published in this volume are not listed, however, among the objects from the various divisions of the city. Separate indexes of the inscriptional material will be found in Appendix B to Ch. X (pp. 212-23 below)].

<sup>&</sup>lt;sup>1</sup> C. of A. II, p. 3.

<sup>&</sup>lt;sup>2</sup> Op. cit. II, p. 3.

<sup>&</sup>lt;sup>3</sup> Op. cit. II, p. 3.

#### CHAPTER II

#### THE GREAT TEMPLE

#### FIRST PERIOD

THE site for the Great Temple (Pl. I, left) seems to have been the very first chosen by Akhenaten, and it is clear from the remains that some structure was erected before the ambitious project comprising the Sanctuary, Per-hai, and Gem-Aten was begun. Some 8 metres inside the present entrance to the temenos lie four heavy oblong foundations of stone measuring 2 metres by 4 (Pl. III, left; Pl. XXV. 1). These were evidently intended to carry some heavy superstructure, which may have been a great gateway, since fragments of painted statuary were found near by. Eleven metres and 17 metres east of these foundations are two oblong depressions, the centre being left on a level with the ground, but shallow trenches, 20 cm. deep, being dug on each side and lined with plaster (Pl. XXV. 2). Probably they were for liquid offerings like the "oblong lavers" outside the west end of the Sanctuary. Remains of a third were found to the east, cut through by the west wall of the later Per-hai. To the south of these, and almost certainly also on the north, run two lines of bases, 1.20 m. ×0.60 and at least 0.50 high (Pl. XXV. 3). These do not line up with the forest of later offering-tables to the south and they disappear under the southern brick wall of Per-hai, where they can be traced for some way (Pl. III). There are at least twenty-seven bases in each line. It is possible that they were offering-tables, but it is hard to dissociate them from the fragments of sphinxes which were found outside the later entrance, and it seems most probable that Akhenaten still kept to the idea of an avenue of sphinxes leading up to his Sanctuary.2 All over this area there is a mud floor which, in front of the gate-foundations, is whitewashed. Whither did this processional way lead? We suggest that it led to the brick chapel which lies at the east end, behind the Sanctuary (Pl. XXV. 4). At intervals below the foundations of the Sanctuary occur pits in which trees had been planted, traces of Nile mud and even roots surviving (Pl. XXVI. 2). The chapel is 6 metres square and was approached by a ramp from the west. The walls were whitewashed and the floor plastered. Originally it seems as if the temenos was intended to stretch only so far, for, as the aerial photograph in Pl. XXIV. 2 clearly shows, there was a depression in the sand a little way east of the chapel which stretches right across the temenos and gives the impression of a foundation trench for a wall.

No objects were found definitely in conjunction with remains of this period. The sculptured remains and the sphinxes which we imagine to have come from the entrance are catalogued below under the remains of the third period, since they were found outside the temenos wall.

<sup>&</sup>lt;sup>1</sup> Davies, Amarna, I, Pl. XXXIII.

<sup>&</sup>lt;sup>2</sup> Is there a trace of a survivor of this avenue in the tomb of Panehsy? See Fig. 2 (= Davies, Amarna, II, Pl. XIX) below the right-hand group of columns.

#### SECOND PERIOD<sup>1</sup>

#### 1. Existing Remains (Pl. VII)

The Temple proper must have been begun almost immediately after the dedication. The mud-brick temenos wall was built, enclosing an area rather larger than had at first been intended, for it runs over 100 metres east of the foundation trench originally intended for it and extends some 10 metres farther both north and south. The wall is comparatively narrow, being a mere 2.50 metres thick. There are no buttresses. Two gateways of the original three still exist besides the main entrance. One is in the middle of the east wall, which is here—at least—whitewashed. A small brick ramp leads up to a stone threshold in which are two pivot-holes. The second gate is rather more doubtful since it is conceivably only a complete break in the wall. It lies 150 metres west of the house of Panehsy immediately opposite the original north gate now built over by the Hall of Foreign Tribute (p. 23 below).

The main entrance lies in the middle of the west wall. On either side are thin pylon towers with no signs of any slot for a flagstaff. The line of the wall continues, though only 0.85 metre high, between the pylons. To surmount this a mud-paved ramp between two brick walls led up to that height from outside and descended within to a point not far short of the original gateway, covering part of the whitewashed floor above mentioned (Pl. XXV. 1, where the dark line in the very middle of the picture indicates the surface of the descending ramp). The original gateway and avenues of offering-tables or sphinxes and trees were retained. In front of the old mud-brick chapel, however, an imposing Sanctuary was built (Pls. VII–IX, and XXVI). This building was certainly erected before the ninth year of Akhenaten's reign, as can be seen from the fact that all the relevant inscriptions from it bear the early form of the name of Aten.<sup>2</sup>

Before the Sanctuary is described it would be as well to outline briefly the method of building so as to make the description clearer. These details of construction have been discovered from a study of the remains not only of the Great Temple but also in Hat-Aten and the Palace. First of all shallow trenches were dug in the virgin soil along the lines the walls were intended to take. These were flooded with white lime plaster on which the exact line of the walls was marked with a taut string dipped in blacking. The walls themselves were then built, each stone, 50-4 by 25-7 cm. in size, being laid in a thin bed of the same plaster, which acted as a mortar. Meanwhile, should any partition walls or light structures such as offering-tables be required inside the building the whole of the interior was flooded with plaster and the exact position of each light party-wall, altar, or offering-table marked out, first with a taut string dipped in black, then by chipping along the lines so drawn. This plaster is often quite rough and could never have been exposed to view in the finished state of the building, not only because of its unsightliness but also because it would easily be rotted by rain. When the foundation blocks had been laid the whole area was covered in with clean sand up to the required height which itself depended on the necessity for bringing the floor of the entire building to a single level. On top of this filling the final floor of mud plaster was laid smooth. Since it was only very rarely that this final floor had survived owing to the destroyers of the buildings wishing to remove

<sup>&</sup>lt;sup>1</sup> In collaboration with Dr. H. Frankfort.

<sup>&</sup>lt;sup>2</sup> A feature of the site used to be the quantity of cut and carved stone on the south side. This was removed by the villagers in the summer of 1933. From a previous, admittedly superficial, examination, however, nothing of importance has disappeared.

even the foundations, we shall refer generally to the lower layer of white plaster as "floor plaster" for the sake of convenience. Should it be necessary to complete one piece of filling before its neighbour a shuttering of mud brick was employed. From the quantity of rubble all over the site of the buildings constructed in this way it seems as if at least the upper part of the walls consisted of a rubble core with a thin stone facing. The area had been partially excavated in 1891 and as a result much of the plaster in which the foundation stones of walls had been set, had been exposed and nearly weathered away. Fortunately, however, our experience on the site of Ḥat-Aten (pp. 94 f.) had taught us that the apparent rubble walls were merely the result of the compression and coagulation of fallen rubble and must be removed in order to find the original foundation trenches, which sometimes still retained the original flooding of plaster to receive the foundation blocks. In many cases this plaster showed the actual marks of those blocks. Where the plaster had disappeared it was necessary to remove the disturbed earth down to virgin sand in order to determine the exact extent of these trenches. At this task the workmen excelled and no tribute is too high for the care and patience with which they distinguished the true virgin sand from that identical sand used as filling.

Some idea of the work can be gathered from Pl. XXVI. 1, which was taken before our excavation began, while Pl. XXVI. 2 shows it in its final state after being cleared and swept.

To begin with the existing remains (Pl. VII). Surrounding the whole area is a thin paving of mud which is obviously similar in character to the mud paving noted above near the entrance to the temenos. Entering along the main axis from the west one first passes into a broad court through a gateway with a stone threshold flanked by small pylon towers. On the left (north) of this is a square enclosure, the walls rising only one brick high, a fact which precludes us from placing the entrance to it exactly. To the right (south) is a group of three small houses, all on the "County Council" plan adopted in the Workmen's Village and elsewhere. They are built of brick with stone thresholds and consist of an entrance-hall, a main living-room, and two private inner rooms. In front of the entrance-hall is a porch, the two easternmost of the houses sharing the same one. These houses were evidently those of the priests on duty.

Next comes a second entrance with traces of a stone threshold between pylon towers. This entrance is flanked by two subsidiary gates. It leads into a large court which surrounds the Sanctuary on three sides. The pathway on the main axis is whitewashed and sunk about 2 cm. below the level of the surrounding mud paving. The court to the south of the Sanctuary has a gate with a stone threshold in the east wall and so presumably had that to the north.

On either side of the Sanctuary is an oblong space enclosed between the outer wall-trenches of the Sanctuary and the trenches of screen walls some 4 metres from them. Of the west wall of the Sanctuary nothing but the trench was left, save for traces of a stone foundation for the gateway. Three metres to the left (north) of this is a sunk foundation enclosed with mud-brick shuttering. It is not at right-angles with any part of the structure and may be either something connected with the old processional way or possibly a builder's error (Pl. XXV. 6). The court which we now enter has lost practically every trace of building. Enough, however, was left to make its reconstruction certain. Along the main axis a thick layer of plaster runs eastwards.

<sup>&</sup>lt;sup>1</sup> This description supersedes previous ones in the preliminary reports, e.g. JEA. XIX. 114, where from the evidence then available it appeared that the clean sand had been put in later and the layer of cement—actually no doubt merely a thick layer of fallen rubble that had coagulated in the course of time—was taken as a deliberate sealing-in of the accursed spot.

<sup>2</sup> C. of A. I, pp. 55 ff. and below, pp. 35, 94, 100, 122.

This is at a level 40 cm, higher than the other remains of plaster in the court and retains marks of paving stones on its surface. It is cut into on each side seven times and these nibbles correspond to depressions in the virgin soil below. Similar depressions at regular intervals occur near the western wall trench. At its eastern end the causeway is broken off abruptly (Pl. XXVI. 3). On either side at this point were many fragments of columns. The south side of the court was slightly better preserved and traces of a party-wall or two could be made out projecting from the southern wall-trench.

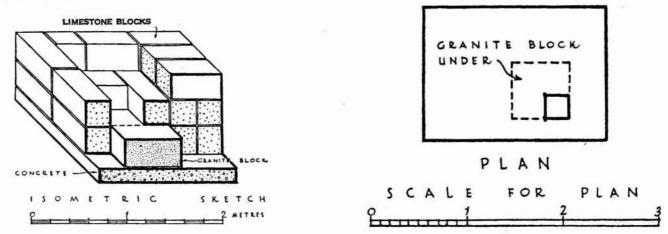


Fig. 1. Detail of the pivot-holes of the gateway into the inner court of the Sanctuary.

In front of the causeway where it is broken off is a deep depression in the sand. On either side of this was a block of masonry containing a socket at the bottom of which was a heavy granite slab (Fig. 1 and Pl. XXVI. 3 foreground). These sockets and the surfaces of the granite slabs were stained green with remains of patinated bronze which had evidently formed the lining. They were 6 metres apart and a large balk of wood lay between them. East of this for some  $3\frac{1}{2}$  metres the site is entirely denuded except to the south where traces of floor plaster were seen.

The entrance system to the inner court was confusing. The floor plaster is on a lower level than that of the causeway and corresponds to that of the rest of the outer court. An L-shaped trench indicates that the approach was winding and other trenches show the presence of rooms, the foundations of the offering-tables which they contained having survived. Below these foundations is a row of four circular pits which contained no trace of tree stumps nor of Nile mud. On the contrary, fragments of gilded wood imply that they were the site of foundation deposits. The main part of the court contained regular depressions in the virgin soil (Pl. XXVI. 4). Two of these preserved stone foundations 1 metre by 75 cm. There was a considerable blank depression towards the east. Surrounding the court was a wall-trench between which and the outer wall-trench occurred floor plaster with occasional indications of party-walls and offering-tables.

The south wall-trench continues east for some 17 metres. Masonry marks on plaster occur at the end, which is cut off sharply. The beginning of the north trench was cleared, but the tremendous labour involved in removing the high dump of the 1891 excavations did not seem worth while and it is therefore assumed to be symmetrical. On the outside the brick wall of the side courts continues, broken at intervals, and encloses a largish area behind the old brick chapel of the first period.

#### 2. Reconstruction

Pl. VIII shows a restored plan of the Sanctuary. This was made possible by the presence of pictures of the Great Temple in numerous tombs. The outer court presents no difficulties, though the priests' houses and the enclosure to the north are omitted in all the drawings. The second court also is simple to reconstruct, the side chambers being indicated in every case. The perspective drawing (Pl. IX. 2) has followed the tomb of Aḥmose in roofing these over, while the restored plan, in the absence of existing remains, prefers those of Meryrē and Paneḥsy where they are left blank.

The first court of the Sanctuary proper is again easy. Every drawing shows the pylon and offering-tables beside which are incense-burners of a type found here (see below, 26/833). Two doubtful points occur, however. The existing remains definitely indicate rooms along the north and south sides. These are not shown in any tomb drawing, though they must have existed. We have reconstructed the main axis as being on a higher level than the surrounding court, needing two steps of 20 cm. each to descend. Such a central gangway is nowhere shown—naturally enough since it would be almost impossible for Egyptian draughtsmanship—and the possibility must be borne in mind that the presumed mud paving of the surrounding court was laid at the same level as the stone paving of the central causeway.

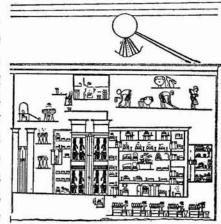


Fig. 2. Representation of the Sanctuary of the Great Temple in the tomb of Panehsy (Davies, *Amarna*, II, Pl. XIX).

In the area corresponding to the denuded area on either side of the end of the causeway, every picture shows a colonnade of four columns on either side of a gateway. Between these columns are Osirid statues of the King, two on each side. It was in this area that the numerous remains of columns lay and fragments of colossal limestone statues were found in the dump outside the south wall of the temenos.

Though all traces of the pylons have disappeared the position of the gateway is certain from the door-sockets mentioned above and shown in Pl. XXVI. 3 and Fig. 1.<sup>2</sup> Quite clearly these sockets had been lined with bronze to hold the pivots of the great doors. The difficulty, however, is their size. They are 6 metres apart and in the days before hinges a huge wooden door with a leaf 3 metres broad could be hung only with difficulty and, when hung, could not be opened or shut. In the restored plan and isometric drawing we have assumed that these sockets were a builder's error, or rather that they had been constructed to prove to His Majesty that not even he could have a door that size! We have, therefore, reduced the breadth to reasonable dimensions while fully realizing that we may either underestimate the ingenuity of Akhenaten's builders or not appreciate that, provided the door was the biggest in the world, it did not matter if it did have to stay perpetually half-open.

Every tomb drawing shows that the entrance to the final court was circuitous. Evidently it was not for profane eyes to look right through to the High Altar. Our reconstruction of this

Meryrēc, Davies, Amarna, I, Pls. XI (reproduced in our Pl. IX. 1) and XXXIII; Panehsy, op. cit. II, Pl. XIX (reproduced in our Fig. 2); Ahmose, op. cit. III, Pl. XXX.

<sup>&</sup>lt;sup>2</sup> Traces of a brickwork blocking were found here by Frankfort, JEA. XIII. 210.

winding route is based on the existing remains but again we must confess to uncertainty as to the steps. It is quite possible that the true floor of mud was raised high enough above the plaster flooring to make them unnecessary. In every case the court is shown surrounded by chapels which appear to be open to the sky. In the most detailed representation, that of Meryrēc, four chambers are shown at the end and three on each side, which is exactly what the existing remains led us to believe. In each of them an altar or offering-table is shown. In our restored plan and drawing we have inserted two such, since that number seems to be indicated by the marks on the plaster. The position of the doors of these chapels has been fixed arbitrarily at the most likely spot, though it agrees in a most remarkable way with the tomb of Meryrēc. The court itself is filled with offering-tables whose position is easily determined by the pits in the sand. Exactly where the High Altar stood is uncertain, but the possible positions are limited by those of the offering-tables. It was naturally destroyed like all the altars of Amarna. The incense-burners, shown in all the tombs, were probably of bronze like the examples in Pl. LX. 5, 6. Ahmose's tomb shows figures of the King and Queen on each side of the High Altar. No other tomb shows them, though that is no argument against their having stood there.

The area to the east of the Sanctuary proper could be approached only from without, and no doorway through the back wall of the Sanctuary is shown in any drawing. It seems clear that the old brick chapel was preserved for sentimental reasons, since it and others probably of lighter construction are always shown.

An apparent inconsistency between the plan of the existing remains and the restored plan will be noticed. In the latter is shown a door which appears to run through the brick wall to the south at this point. Such a door, however, appears in nearly all the drawings and we are uncertain as to the height of the floor on either side of the wall, which may have been low enough here to act as a threshold.

Of the decoration of the Sanctuary we know very little. The good stone-work had mostly been taken, though one admirable relief is mentioned below. Petrie records a stela of crystalline limestone. Numerous blocks of sandstone and limestone, mostly very roughly cut, were inscribed with the royal names and the cartouches of the Aten in the early form. The column fragments correspond exactly to those shown in the drawings and have been so restored by Mr. Lavers. Fragments of the colossal Osirid statues of the King which stood between them were found both by Petrie and by ourselves, in the dump to the south, together with numerous pieces of smaller sculpture.

Next we may take the immediate surroundings of the Sanctuary; for the positions see Pl. I, top left. Not all of those shown in the tomb drawings were found, since some were probably of very light materials, but the following could be identified with certainty. These are always shown as lying within the first enclosure. This, however, is probably due to economy of space on the tomb walls.

1. The Butchers' Yard. Outside the north-west corner of the Sanctuary is a large enclosure bounded by thin walls and entered over a stone threshold at the east end of the south wall. One or two pierced tethering stones were found on the surface and it corresponds with the area shown in the tombs of Meryrē' and Paneḥṣy, which is clearly the enclosure where the animals were slaughtered and dismembered for sacrifice.

<sup>&</sup>lt;sup>1</sup> Tell el Amarna, Pl. XII. 1, with p. 11 (§ 19).

- 2. The "Benben" and Statue. The site of these is between the Buchers' Yard and the Sanctuary. Here are remains of plaster for foundations at a depth of half a metre below the surface. They form a square which is approached from the east by what appears to have been a brick ramp from the level of the desert. Evidently these foundations were intended to support some heavy weight and since fragments of a purple quartzite stela were found all over this area it seems best to assume that this is the site of the great round-topped stela approached by a ramp which occupies a corresponding position in the tombs. From the square foundation a smaller oblong trench projects southwards which was almost certainly dug to receive the substructure of the seated colossus of the King, which is always shown in conjunction with the stela. Outside the south-west corner are traces of plaster on a level with the surface of the desert. They consist of an east-west line 3 metres long and half a metre wide with three projections of 4 metres towards the south. The purpose of these is unknown.
- 3. The "Corn Floors", not shown in Pl. I. To the south of the priests' houses in the first enclosure is a mud-paved area and to the south of that are a series of low ridges in the sand forming rectangles of various shapes and sizes. The sand was evidently heaped in this way deliberately and the only explanation we can give is that corn was heaped here, the ridges preventing one load from sliding into the next<sup>2</sup> (Pl. XXV. 5).
- 4. The "Arab Tomb." Some way south-west of the Sanctuary lies an isolated Arab tomb in the middle of a small area enclosed by an ancient wall half a brick thick. In the western division of this area were many jar sealings.
- 5. The Dump. As has been said, this lies outside the temenos wall immediately south of the Sanctuary close to a gateway in the wall. West of it are more "corn floors". Its chief interest lies in the fact that drift sand had blown up against the wall from the south, where there is a considerable area of soft sand and little protection by other buildings, to a depth of a metre and a half before the broken fragments from the Sanctuary were brought there. Such an accumulation is further evidence for the destruction of the Temple by Ḥaremḥab rather than by Tut ankhamūn.

Finally, we must mention a hitherto unexplained phenomenon, a kind of pathway some 3 metres wide of rough desert stones which seem to have been swept here from the whole of the temenos. This line runs from a point on the south temenos wall some 60 metres from its west end to the south-west corner of the Sanctuary. The ordinary custom was to sweep the stones away from a road to form little ridges on either side. It is possible that it was laid so that the rollers on which the heavy statues and stelae were transported should not sink into the soft sand. Such a road to-day is called Sikket el-ragala.

#### OBJECTS

Sanctuary

- 26/10. Fragment of faience with & inscribed, 6 cm. long (Ashmolean).
  - 11, 13, 16, 17. Ditto, with lines (Keighley).
  - 12. Ditto, with rim of cartouche, 7.3 cm. long (Dublin).
  - 18. Fragment of gold foil.

<sup>&</sup>lt;sup>1</sup> For this name see below, pp. 194, 195.

<sup>&</sup>lt;sup>2</sup> Cf. Davies, Amarna, I, Pl. XXXI, right page. A similar method, but with mud, not hard sand, is used outside the village of Et-Till to-day.

- 19. Bronze sheath, 8.2 cm. long (Cairo).
- 94. Fragment of faience inscribed with \( \frac{1}{2} \) is between \( \frac{1}{2} \) is over \( \sigma^2 \) is, 4.5 cm. square.
- 95. Fragment of granite bowl with part of later Aten name on rim, 12 cm. long (East Anglia).
- 203. Fragment of blue glazed tile, 10 cm. long (Dublin).
- 833. Bronze incense-burners inscribed with the King's names, 35 cm. high. Exactly of the type seen in the tomb pictures standing by offering-tables. (Pl. LX. 5, 6; Fig. 25.)
- 834. Bronze situla inscribed with royal and divine names and dedicated by the standard-bearer, Ratmose, of the Sehetep-Aten regiment, 30.5 cm. high (Cairo). (Pl. LX. 7; Fig. 25.)
- 835. Ditto, inscribed with royal and divine names, 24.7 cm. high (Brooklyn). (Pl. LX. 7; Fig. 25.)
- 836. Ditto, inscribed with the name of Rēc-Ḥarakhte and Akhenaten, 22 cm. high (British Museum). (Pl. LX. 8; Fig. 25.)
- 837. Ditto, 24 cm. high (Ashmolean). (Pl. LX. 8; Fig. 25.)
- 838. Ditto, much broken, 25.2 cm. high (San Diego).
- 839. Ditto, 27 cm. high (British Museum). (Fig. 25.)
- 26/S. 1-7, 9, 31, 32, 136-43. Fragments of life-size statues of the King or Queen in crystalline limestone, bearing early Aten names.
  - 8. Sandstone block with the heads of four men in relief, 12.8 cm. long (British Museum).
  - 10. Fragment of limestone decorated with spirals, 18.3 cm. long (Copenhagen).
  - 11. Fragment of sandstone with three heads in relief, 10.5 cm. long (Bolton).
  - 12. Fragment of coarser limestone relief showing head of a princess, 13.2 cm. long (San Diego).
  - 24, 30, 114-17. Fragment of limestone statue base inscribed with the name of King Ḥaremḥab (British Museum). (Pl. LX. 3.)
  - 46. Part of uraeus cornice in limestone, 18 cm. high.
  - 61, 62. Parts of limestone stela with later Aten names.
  - 65. Ditto, with early name.
  - 70. Ditto.
  - 78. Ditto.
  - Five blocks of limestone forming part of scene of servants and chariots, 55 cm. long (New York). (Pl. LX. 2.)
  - 87. Part of limestone stela with later Aten name, 54 cm. long (Pasadena).
  - 92a. Part of limestone cavetto.
  - Limestone block showing chariot wheel and captive kneeling on a spoke, 54 cm. long (Ashmolean).
  - 94. Limestone block showing women with raised hands, 54 cm. long (Pasadena).
  - 95. Ditto, showing part of body (Copenhagen).
  - 120. Ditto, with floral design, 12.5 cm. long.

#### East End

- 33/4. Head of sphinx in limestone, face broken, 32 cm. high. (Pl. LX. 1.)
  - 5. Fragment of wig in sandstone for inlay, 9.8 cm. high (East Anglia).
  - Head of sandstone statue, originally inlaid. ? Smenkhkarē<sup>4</sup>, 22 cm. high (Brooklyn). (Pl. LIX. 6, 7, 8.)

#### West End

- 33/7. Three fragments of gold leaf (Cairo).
  - 11. Bronze tweezers, 5 cm. long. .
  - 17. Part of wig in black granite, 8.5 cm. long (British Museum).

#### Foundation Deposits (?)

33/16. Fragment of painted and gilt wood and some gold leaf.

#### The Stela

33/-. Many fragments of purple sandstone from the stela and of black granite from the statue (cf. Petrie, op. cit. 18).

"Butchers' Yard"

33/321. Fragment of the Queen's head in sandstone, 10-3 cm. long (Manchester Museum).

#### The Dump

- 36/76, 90, 96. Upper part of much battered painted limestone statue of the Queen, 52·3 cm. high (Cairo). (Pl. LXI. 4.)
- 77. Limestone relief fragment showing part of an altar, 9.6 cm. (Ashmolean).
- 78. Similar fragment, 11 cm. long.
- 79, 92, 99, 104, 105. Fragments of inscribed bricks or tiles of blue faience (British Museum).
- 80. Alabaster cylinder, 1.4 cm. long.
- 81. Clenched hand from black granite statue, 7 cm. across.
- 82. Part of upper arm of sandstone statue, 12 cm. long.
- 86. Fragment of faience of Bes holding cymbals, 2.3 cm. long.
- 89. Shoulder and elbow of painted limestone statue holding a flail, 20 cm. high (Otago).
- 91. Uraeus head in blue faience, 2.7 cm. long.
- 94. Fragment of sandstone relief showing head of a princess, 6.5 cm. wide.
- Hand supporting part of an offering-table in crystalline limestone, 18 cm. long (Cairo). (Pl. LXI. 3.)
- 98. Ditto, 8.75 cm. long (Cairo). (Pl. LXI. 3.)
- 100. Ditto, 33 cm. long (Cairo). (Pl. LXI. 3.)
- 101. Fragment of limestone relief showing arms of adorant and rays, 10.75 cm.
- 102. Two fragments of pottery: a hawk's head, 2 cm. high, and a foreigner's head, 3.5 cm. high. (Pl. LXXIX. 12.)
- 103. Fragment of faience tile showing flowers, 6.4 cm. long (Brussels).
- 106. Part of foot from a black granite statue, 7.5 cm. long (Ashmolean).
- 107. Fragment of plaster with sinscribed in ink, 8.2 cm. long (Boston).
- 109. Group of monkeys in limestone, 6.1 cm. wide (Brooklyn).
- 110. Part of small sandstone stela (?) engraved with meaningless lines (cf. Mond-Myers, The Bucheum, III, Pl. LXII), 7.2 cm. high.

Also Pendant in the form of a double cartouche of Akhenaten, Type IV. E. 2. Many miniature clay vases (Pl. LXII. 5).

Fragments of colossi in bad local limestone (Pl. LXI. 1, 2).

Shoulder, collar-bone, upper part of flail, 53 cm. high.

Knee with lower part of skirt, 35 cm. across.

Foot with part of sandal.

Three left hands gripping the flail.

Two fragments of beards, one 42 cm. long.

Part of stomach and skirt. Beginning of early Aten cartouche on the belt.

Petrie found here (op. cit., p. 18) six fragments of statues over life size, four fragments of life size, and two under life size of the King and five fragments under life size of the Queen, all in fairly good stone. Of the colossi he found an ear, a toe, and part of the chest. Also fragments of offering-tables.

#### THIRD PERIOD

#### 1. Existing Remains

The third and final period of the Temple came some time after the ninth year of Akhenaten (Pls. III-VI). The construction of Per-ḥai and Gem-Aten¹ was decided upon, which meant the complete abandonment of the old processional way. The gateway of the first period and the eastern end of the avenue of sphinxes (see above, p. 5) were demolished and the third sunken

<sup>&</sup>lt;sup>1</sup> For the position of these see Pl. I, Q 39.

offering-trough was cut through by the west wall of Per-ḥai. In order to make a clean sweep, the level of the ground between the main entrance to the temenos and the west façade of Per-ḥai was raised about a metre, covering the foundations of the old entrance and the two remaining offertory-troughs, which latter were replaced by a similar trough to the left and a circular trough to the right of the axis (Pl. XXV. 2). This raising of the ground meant that the approach was on a level with the top of the ramp (Pl. XXV. 1). But in order not to interfere with the offering-tables to north and south which may already have been in position, or more probably so as to avoid the gigantic task of raising the whole temenos to this new level, it was sloped down north and south to the old surface of the desert.

To the left (north) of the entrance are heavy foundations of concrete, running down to the original level a metre below. No objects or architectural features were found here, but the square blocks connected by narrower strips were evidently intended to support columns (Pl. XXVII. 1).

On the main axis came the building called Per-ḥai.<sup>2</sup> The wall which surrounds this on three sides is of brick with balks of timber running through it and a stone facing inside and out. A slight set-back at the south end of the west wall probably implies that the central entrance was flanked by pylons. The north-west corner, however, was overrun with a complex of small walls which may or may not be contemporary, and certainty as to the arrangement is impossible. The stone facing is too fragmentary to preserve any trace of sockets for flagstaffs. On either side in front of the entrance are the remains of two trees. Within are two gigantic platforms of concrete which had been poured into a shuttering of stone and ran down 1.35 metres (Pl. XXVII. 2). On the surface of these we could easily make out the position of the paving slabs and of the columns, eight arranged in two rows of four on each platform (Pls. III, IV, VI A). Fragments of these columns were found lying in the surrounding wall-trenches.

In the north-west corner of the northern platform and in the south-west corner of the southern were big rectangular set-backs which must have been filled with solid blocks of masonry. At the east end of each platform steps led down, perhaps to chambers in the thickness of the pylon towers which separate Per-ḥai from Gem-Aten to the east, perhaps right through the wall.

Between the platforms is a causeway the plaster setting of whose paving stones was laid on a sand filling. This causeway seems to have been carried eastwards to Gem-Aten on the same level, though temporary shuttering of brick was needed owing to the fact that the entrance pylons had not then been constructed. Of these pylons no stone remained, the plaster in which the foundations had been set alone giving the clue to their size.

The rest of the structure, consisting of a number of long open courts, was called Gem-Aten. The existing remains are as follows.<sup>3</sup> The level of the ground rises towards the east and as a result the floor plaster has been stepped up several times by about 25 cm. (i.e. the depth of a block) a time. As we have seen, this, however, would have been concealed by the true mud floor, which would have been laid level. The first three courts are practically identical in plan

<sup>&</sup>lt;sup>1</sup> See JEA. XX. 216 for a justification of the use of this term.

<sup>&</sup>lt;sup>2</sup> For the position see Pl. I and for plan of the existing remains see Pl. III.

<sup>&</sup>lt;sup>3</sup> In Courts 1 and 2 the northern wall-trench could not be excavated owing to the presence of the modern cemetery. Some graves had even encroached on to Court 1. One of these can be seen, walled round by us, on the right-hand side of Pl. XXVII. 3.

though varying in size and are separated one from the next by pylons of the same type as that between Per-hai and Gem-Aten. As excavated, they are surrounded by platforms of hard sand filling covered with a layer of plaster unfortunately too weathered to preserve anything save the merest trace of stone marks. The top of these platforms is level throughout, though their height above the floor plaster varies from 1.15 m. at the west end to a mere 50 cm. at the east end, where the floor plaster has risen with the level of the ground. Down the centre of each court runs a causeway of the same height and construction as the side platforms (Pl. XXVIII. 1). On either side of this causeway, between it and the platforms to north and south, the courts had been flooded with plaster on which were the marks of the foundations of offering-tables and in some cases the foundations themselves (Pl. XXVII. 3). Four rows were grouped on each side of the causeway. However, at the west end of Court 1 their place was taken by four larger objects, two on each side, of which the original marking-out alone remained. Pl. XXVII. 4 shows the emergence of the foundations of two offering-tables in Court 1 from a mass of radīm covered with a layer of plaster and rubble which had hardened into a kind of concrete in the course of time. As much of this radīm consisted of clean sand it was originally suggested that the destroyer of the Temple, Haremhab or another, had covered the whole area with clean sand and sealed in the infectious spot in his hatred of Atenism. We now know that this was part of the original filling between the floor plaster and the floor proper (see above, pp. 6, 7).

Court 1 differs from the others in various ways. The causeway which ran from Per-ḥai seems to have entered it at a slightly lower level than the platforms (Pl. XXVII. 3, middle distance just to right of centre) and to have stepped up to them on either side. Marks on the plaster immediately in front of the entrance seem to imply a flight of steps leading down to a level lower still. The central causeway does not begin until half-way down the court and again there are marks in the plaster, which at this point alone runs right across the court from platform to platform, implying a flight of steps leading up from the lower level to the causeway. Between the sites of these two possible stairways the floor plaster has completely disappeared. Court 3 is peculiar in that the platforms occur only along the north and south sides. At its east end are marks of a straight wall with no signs of pylons. Between this wall and the next set of pylons to the east the floor plaster is marked out for the square foundations of columns. Of these columns fragments were found (Pl. XXVIII. 2); they show a slight irregularity in that the western pair next to the middle is missing and is replaced by a group of offering-tables. The place of the central causeway is here taken by a layer of bricks sunk flush with the floor plaster. In-Court 4 the platforms have completely disappeared though the causeway is back again and the whole court is filled with offering-tables.

Last of all come two inner sanctuary courts, surrounded, like the inner court of the Sanctuary, with small chambers each of which contained marks of one or more offering-tables (Pl. XXVIII. 3, 4). Towards the back of each court was a clear indication of a great altar surrounded by offering-tables. The entrance system to these courts is uncertain, the floor plaster being much decayed and bearing few marks.

Outside Per-hai and the western half of Gem-Aten to north and south lay a forest of offering-tables, see Pl. IV, bottom left. These were of mud brick, measuring about 1 metre by

<sup>&</sup>lt;sup>1</sup> These were only present in full force on the south side owing to the above-mentioned encroachment of the modern cemetery from the north (p. 14, n. 1). However, enough on that side, too, was recovered to show that the same system obtained.

1.50, the best preserved specimen standing to a height of just under 1 metre. There is no trace of decoration or whitewash though they are plastered with mud. There are forty-five from east to west and twenty from north to south, a grand total on each side of nine hundred.

#### 2. Reconstruction

Pl. IV shows our restored plan of this part of the Great Temple, Pl. V shows the representations of it in the tombs of Meryrē I and Paneḥsy, and Pl. VI gives an isometric reconstruction of it.

In the tomb reliefs the tall thin pylons of the main entrance are clearly shown and in both cases the pavilion to the left of it is given. Unfortunately, beyond confirming our idea that there were columns here the pictures of the pavilion do not help us much. To the north is another Butchers' Yard which must lie under the modern cemetery. The forest of offeringtables flanking the buildings is clearly indicated. Next come the pylons of Per-hai, each fronted by five flagstaffs. In the tomb of Meryret the eight columns of each of the two pavilions just within are shown as if the pylons were transparent. As in this tomb a roof is shown extending right across, it is possible that our isometric reconstruction is wrong in making the path between them open to the sky. In the tomb of Panelsy these two pavilions have been omitted, and the three first courts of Gem-Aten are reduced to two for economy of space. In the tomb of Meryrec the two oblong objects on each side at the west end of Court 1 are clearly shown but with no indication of their intention. A great altar approached by a ramp or flight of steps occupies the centre of Court 1, and this may have been the object which occupied the area in that court where no plaster remains, for we have seen above how thorough was the destruction of altars. The offering-tables on either side of the central aisle are shown, and all round the court are small booths whose exact position we could no doubt have determined had the surface of the platforms been in better condition. It is noteworthy that in the easternmost court shown in the tomb of Meryrec the booths only occur at the sides. We have seen that in Court 3 there were no platforms at either end. Now, in view of the fact that there is no indication in either of these tombs of any difference in level or of any raised central causeway, it is probably better to assume that the mud paving above the floor plaster was on a level with causeway and platforms. In that case the causeway would have been paved with stone merely because it would receive more wear and the "platforms" because they had to support the booths. The alternative reconstruction is, however, given in Pl. VI. East of Court 3 both tombs show a colonnade. Meryrec rather more successfully represents its irregular nature, though the little houses shown here have no existence in fact. I very much suspect that the artist has made a mistake and placed here the priests' houses which are really at the entrance to the Sanctuary. They are precisely of this plan with an entrance hall and two private rooms.

The two inner sanctuary courts are well shown with their central altars and their surrounding chambers or chapels each containing an altar or offering-table.

Neither the tomb drawings nor the existing remains give any reason to believe that there was a door leading out eastwards. It seems clear therefore that Per-ḥai and Gem-Aten in some way superseded the older Sanctuary. They were not, in fact, merely part of a grand approach to

<sup>&</sup>lt;sup>1</sup> For a fragment of a balustrade which may have been part of this altar see Cairo 27. 3. 25. 9 (Pl. LVII. 5, 6, and 8 and p. 19 below). See further p. 192.

it. This idea is strengthened by the fact that in every case the royal family is shown worshipping here. The one exception is in the Royal Tomb, in which the chambers of Meketaten were decorated just about Akhenaten's ninth year. Here the King is seen at the entrance to the Sanctuary, but the Sanctuary is the only part of the Great Temple shown—evidently Per-ḥai and Gem-Aten had not yet been built.

These tomb pictures give us an extraordinarily good idea of what the Temple must have looked like. Probably it was the simplicity as well as the novelty of the plan which ensured the accuracy of the artist. We shall see what a different story there is to tell when we come to try and identify parts of the Palace in the tomb pictures, for very few sections of that building could have been open to the public and the complexity of the arrangement militated against the artist's getting a clear picture in his mind.

Apart from the few structures north of the Sanctuary, which we have suggested may have been of some very light material, the only things left unidentified are the eight "oblong lavers" which are shown in the tombs as lying between Gem-Aten and the Sanctuary. Since for economy of space these two buildings are represented as practically contiguous, though in fact over 300 metres separates them, we have nothing to go on with regard to their exact position. Unfortunately, also, the modern cemetery has expanded into this open space so as more than to cover the axis.

#### OBJECTS

#### Outside the West Entrance to the Temenos

- 32/2. Fragment of offering-table with slots for faience inlay, 7.8 cm. long.
  - 6. Bronze nail, 2.5 cm. long (Copenhagen).
  - 7. Fragment of shoulder and collar from small calcite figure, 10·1 cm. long (Cairo).
  - 9. Fragment of limestone incised with a bird and a tree, 14.4 cm. long.
  - 11. Fragment of granite with feather pattern, 5.8 cm. long (Birmingham).
  - 12. Battered limestone head of a king (? Amenophis III from his fat cheeks), 16·2 cm. long (Ashmolean, Oxford). (Pl. LVII. 1.)
  - 14. Part of granite head-dress for inlay, 11 cm. long (Fitzwilliam, Cambridge).
  - 15. Fragment of foot in red sandstone, 9.8 cm. long.
  - 16. Fragments of ten faience plaques (Brooklyn, Brussels, Copenhagen, Fitzwilliam, and Ashmolean).
  - 17. Fragment of faience plaque, 7 cm. long (Brooklyn).
  - 19. Fragment of limestone frieze of flowers, 22.2 cm. long (Birmingham).
  - 20. Hindquarters of recumbent sphinx in limestone, 30.4 cm. long (Fitzwilliam). (Pl. LVIII. 3.)
  - 21. Fragment of calcite relief showing a knee, 5.8 cm. long.
  - 22. Faience pendant in form of mandrake, red and yellow, 3 cm. long (Fitzwilliam).
  - 23. Fragment of faience fish plaque, 5.2 cm. long (Cairo).
  - 25. Fingers of a hand from a sandstone statue, 3.7 cm. long (Canford School).
  - 26. Part of limestone trial piece carved with human features on both sides, 11 cm. long (Brussels).
  - 28. Knee and part of kilt of kneeling limestone figure, 12 cm. long (Fitzwilliam).
  - Torso of painted limestone Osirid figure, 35 cm. high. (Pl. LVII. 2.)
  - Chin and neck of similar statue, 14 cm. high.
  - Fragments of five clenched hands from similar statues.
  - Part of granite war helmet, 15 cm. high.

## Inside the SW. corner of the Temenos

- 32/29. Part of kneeling figure in painted limestone, 2.4 cm. long (San Diego). (Pl. LVII. 7.)
  - 31. Limestone fragment inscribed with hand, 5 cm. long (Fitzwilliam).

Inside the Temenos, south of offering-tables

32/30. Eleven fragments of faience plaques (Stowe, Fitzwilliam, St. Paul's, and Merchant Taylors).

32. Two fragments of faience plaques (Brussels).

Ring bezel of Akhenaten, Type I. A. 2b.

Southern. Offering-tables

32/33. Bronze ring inscribed "Harakhte", 2.8 cm. long (Copenhagen).

Ring of Smenkhkarë, Type I. A. 3a.

The N. Temenos Wall at a point 100 metres W. of the Hall of Foreign Tribute

33/30. Seven wooden uraei and fragments of the bar to which they were attached. Gilt disk, blue head, bodies blue, red, and green picked out with gilt, 15 cm. high. Bought (San Diego and Manchester). (Pl. LXI. 5.)

## Inside the West Entrance to the Temenos

32/34. Limestone fragment with foot incised, 12.4 cm. long (East Anglia).

- 35. Part of limestone trial piece partly carved, partly drawn in ink showing top of King's head, 11.6 cm. long (Glasgow).
- 148. Green faience scarab inscribed with a feather, 1.5 cm. long.
- 155. One shoulder and neck of statuette in blue faience with cartouche of Akhenaten on shoulder, 2.9 cm. long.
- 190. Fragment of limestone inlaid with paint, 5.9 cm. long (Cairo).
- 222. Fragment of faience plaque, 6 cm. long (Cairo).

## Per-hai

- 32/38. Part of torso of Queen in relief for inlay. Limestone, 16.5 cm. long (Cairo). (Pl. LIX. 5.)
  - 39. Part of black granite stela inscribed on both sides with space for inlaying disk in another material, 12.5 cm. long.
  - 40. Fragment of limestone relief showing a hand, 5.6 cm. long (Fitzwilliam).
  - 43. Fragment of painted limestone inscription, 14 cm. long (Glasgow). (Believed to have been "planted" by a workman.)
  - 48. Fragment of limestone relief showing part of column and offering-table, 19.2 cm. long (Fitz-william).
  - 49. Fragment of limestone relief showing royal stomach, 29 cm. high (San Diego).
  - 50. Limestone block inscribed on both sides. A. Part of normal titles of the Aten. B. Heads of two royal figures embracing under the disk, Akhenaten and Smenkhkarë.  $50 \times 25$  cm.
  - 54. Limestone block with relief of flower vase (?) on three sides, 19 cm. high.
  - 55. Limestone block showing hind quarters of cow in relief, 22 cm. high. (Pl. LVIII. 5.)
  - 59. Head of duck in blue faience for inlay, 4.9 cm. long (Cairo).
  - 61. Face of King in sandstone relief for inlay, 12 cm. high (Brooklyn). (Pl. LVII. 4.)

# Gem-Aten, Courts 1 and 2

- 32/51. Fragment of alabaster relief showing captives, 18.5 cm. high.
  - 52. Ditto, showing back of head, 10.2 cm. high (Brussels).
  - 53. Relief of hawk's tail (?) in black granite, 9.3 cm. long (Cairo).
  - 56. Part of war helmet in black granite, 12.2 cm. long.
  - 57. Fragment of limestone relief showing royal kilt, 16 cm. high.
  - 62. Three fragments from the alabaster relief 51 and 52 (Brussels).
  - 63. Three fragments of alabaster relief showing royal figures (San Diego and Brussels).
  - 65. Part of black granite relief showing the King offering, 25.3 cm. high (Cairo).
  - 66. Part of alabaster relief showing jewel stand, 22.6 cm. high.
  - 68. Part of crystalline limestone relief with name of Meritaten, her relationship to Nefertiti and part of the latter's name deliberately erased, 14.4 cm. high (East Anglia).

- 69. Part of red sandstone relief showing the King offering, 17.2 cm. long (Brussels). (Pl. LVIII. 4.)
- 70. Head of negro in relief, alabaster, from the relief 51 and 52, 9.4 cm. long (Brussels).
- 71. Wooden kohl pot with lid, probably Arab.
- 72. Fragment of calcite inlay decorated with feathers, 7 cm. long. (Pl. LXI. 6.)
- Sculptor's trial piece showing two royal heads in relief. From the S. wall trench. Cf. JEA. XIX.
   30 em. long (Cairo). (Pl. LIX. 1.)
- 76. Fragment of red granite relief showing head and shoulders of a princess, 9.5 cm. long (Cairo). (Pl. LVII. 3.)
- 77. Part of limestone block showing human face in relief, 18.3 cm. high (Copenhagen).
- 78. Unfinished sculptor's trial piece showing unfinished head of Nefertiti. From the N. wall trench, W. end, 26 cm. long (Brooklyn). (Pl. LIX. 4.)
- 80. Two fragments of sandstone inlay showing head and foot of ibis, 12 cm., 7·2 cm. long (Cairo). (Pl. LXI. 6.)
- 81. Head and upper part of hawk in red granite for inlay, 14.6 cm. (Cairo). (Pl. LVIII. 6.)
- 82. Fragment of black granite inlay of a wing, 9.2 cm. long (Ashmolean). (Pl. LXI. 6.)

Also presumably Cairo 27:3:25:9, balustrade of crystalline limestone showing royal figures worshipping on each side and cartouches on the roll-top, 1·30 cm. high. (Pl. LVII. 5, 6, 8.)

## Gem-Aten, Court 3, Colonnade, and Court 4

- 32/83. Wing in black granite for inlay, 17.6 cm. long (Cairo).
  - 84. Limestone block showing legs of princesses in relief, 26.5 cm. long (Cairo). (Pl. LVIII. 2.)

## Gem-Aten, two Sanctuary Courts

- 32/85. Fragment of faience plaque, 8.4 cm. long (Cairo).
  - 86. Head of snake for inlay in red granite, 7.6 cm. long (Cairo).
  - 87. Part of statuette (head and lower part of legs missing) of a princess, 16.8 cm. high (Cairo).
  - 88. Sculptor's trial piece in limestone showing human head, 15.2 cm. long (San Diego).
  - 93. Limestone block showing relief of horses, 30 cm; long (Brooklyn). (Pl. LVIII. 1.)
  - 100. Sculptor's trial piece in limestone, carved on both sides. A. Head of Nefertiti. B. Kneeling figure. From the S. wall trench, 26 cm. high. (Cairo.) (Pl. LIX. 2, 3.)
  - 111 and 154. Two much-battered figures of princesses in high relief. Purple sandstone, 21 cm. high (Cairo and Winchester).
  - 112. Fragment of granite relief showing head of princess, 7.4 cm. long (Brussels). (Pl. LVIII. 4.)
  - 130. Part of brown sandstone relief showing head of King, 10·1 cm. high (Copenhagen). (Pl. LVIII. 4.)
  - 131. Lower part of granite statuette of a princess, 13 cm. long (Cairo).
  - 133. Part of purple sandstone relief showing head of figure bowed to the ground. Red paint on lips, 10.8 cm. high (Cairo). (Pl. LVIII. 4.)
  - 147. Most of an inscribed offering-table in limestone with slots for faience inlays, 21 cm. long (Cairo). Faience pendant in form of cartouche of the Aten (early form), Type IV. E. 6.

Also scattered over the whole of Per-hai and Gem-Aten a quantity of decorated and inscribed fragments, facsimiles of some of which are given in Pls. CII, CIII, Nos. 35, 42, 44, 45, 47. Cf. also Petrie (op. cit. 43, and Pl. XI. 5) for fragment of limestone inscribed with the name of Ḥaremḥab.

## SUMMARY OF UNIMPORTANT OBJECTS FROM THE TEMPLE

## Outside the W. Entrance to the Temenos

- 32/1. Fragment of alabaster. 3. Fragment of decorated limestone. 4. Small limestone bar. 5. Fragment of flint knife. 8. Rough flake of limestone with ink scribbles. 10. Fragment of decorated sandstone.
  - 12. Fragment of faience cartouche of the Aten. 17. Fragment of limestone with incised hand.
  - 24. Fragment of sandstone with holes for faience inlays. 27. Fragment of calcite ribbed inlay. Pendants IV. B. 20. Mould for inlay 573. Inlays 538 (2). Beads I, III, IV, VI, VIII, XIX, XXIV (8), XXXI, XXXII.

Inside SW. corner of the Temenos Pottery, XIV. 3.

Inside the Temenos S. of Offering-tables

Rings I. B. 1, I. C. 5. Pendants IV. A. 10, IV. D. 10. Inlays 458 (6). Beads X, XXVI (2).

Southern Offering-tables

Rings I. C. 5 (2). Pendant IV. C. 6. Beads XVIII, XXII.

Inside the West Entrance to the Temenos

32/36. Fragment of Coptic pottery (Pl. LXI. 6). 37. Sandstone fragment inscribed with hands. Ring I. C. 26. Udat eye III. B. 4. Pendant IV. C. 12. Bead XIX.

Per-hai

32/41. Two fragments of faience tiles. 42. Five fragments of calcite inlay. 44. Five fragments of black granite inlays. 45. Part of black granite disk. 46. Fragment of limestone offering-table. 47. Ditto. Pendant IV. C. 5. Inlay 473. Beads VI, VIII, XXIV, XXXII, XXXIII.

Gem-Aten, Courts 1 and 2.

32/58. Part of sandstone relief showing finger. 64. Fragment of red granite relief showing legs. 67. Fragment of alabaster relief showing legs. 73. Three fragments of faience. 74. Slate disk. 79. Fragment of granite relief showing hand and vase. Ring I. C. 5. Pendant IV. C. 6. Mould IV. D. 2. Inlay 267. Beads VI, VIII, XXIX, XXXII, XLVII, L.

Gem-Aten, Court 3, and Court 4 Colonnade

Pendant IV. C. 1c. Bead XXXV.

Gem-Aten, Two Sanctuary Courts

32/113. Fragment of sculptor's trial piece showing part of a jaw. 132. Fragment of sandstone with part of figure incised. 146. Fragment of sandstone which may be cheek of a statue, 10.5 cm. long. Pendant IV. C. 5.

The Sanctuary

26/14, 15. Fragments of faience. 5, 13–21, 33–7, 110, 112. Fragments of inscribed sandstone. S. 22, 23, 25–9, 38–45, 47–60, 63, 64, 67, 68, 72–7, 80–6, 88–90, 108, 109, 111, 113, 119, 121, 122, 124, 125, 144, 145. Ditto of limestone. S. 66, 69–71, 123. Fragment of granite. From the west end. Pendant IV. D. 12. Inlay 478. Beads XII, XXIV. From the East end. Inlay 478. Mould IV. C. 11. Beads. VIII, XXV. Also fragments of bark and of alabaster.

The Dump

36/33. Fragment of faience. 95. Alabaster lid. 108. Fragment of pierced horn. Pendants IV. B. 18, IV. B. 26, IV. C. 7, IV. C. 11. Beads, XXIV, XXV(2), XXXIII. Pottery IV. 5 (several, some containing a resinous material). XV. 22 (very many, some with a nicked band round the base).

## CHAPTER III

# THE DEPENDENCIES OF THE GREAT TEMPLE

I. S. 39.1. This building lies some 100 metres to the north of the temenos wall of the Great Temple and about 300 metres from its eastern end; for the position see Pl. I. The area it occupies is part of the modern cemetery and, indeed, forms a section of the ground devoted to

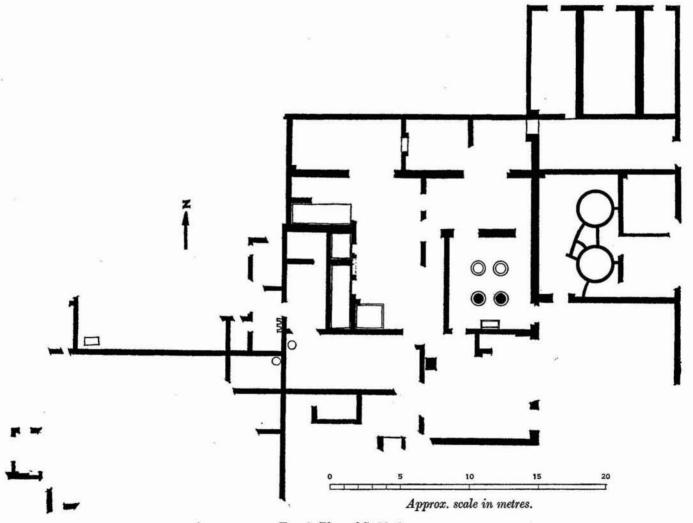


Fig. 3. Plan of S. 39. 1.

the family tombs of the Omdas of the district. Thanks to the courtesy of Abd el Moneim Effendi Mohammed and his father Mohammed Bey Mustafa, we were permitted to clear the structure on condition that we filled it in again so that a tomb could be erected on the spot. Not all of it, however, could be excavated, since to east and west the walls ran through ground already occupied by the cemetery.

The building seems to have been in the nature of a series of storerooms, not unlike some of those between the Great Temple and the Royal Estate. As can be seen from the accompanying

plan (Fig. 3), there are one or two brick-lined cellarettes and two small corn-bins. The main room contained two pillars made of specially moulded mud brick surrounding a central wooden post. Outside the brick was a fluted moulding of mud, the whole being whitewashed (cf. the similar column found in R. 41. 5, p. 109 below).

#### OBJECTS

- 33/1. Torso of clay statuette, 7.4 cm. long (Cairo).
  - 47. Fragment of wooden uraeus painted red and green picked out with yellow, 9.6 cm. long. Cf. 32/30 from inside temenos wall near by.
  - 48. Bronze dagger with ribbed hilt of bronze, 26.6 cm. long (Cairo). (Pl. LXXVI. 9.)
  - 51. Sherd from vase painted in blue with ox led by a rope. The ox has elaborate trappings and a duck is on his back, 16 cm. long.
  - 69. Sculptor's trial piece in limestone carved on either side with a human head, 16 cm. long (Cairo). (Pl. LXII. 1.)
  - 70. Two flat bronze knives, leaf-shaped, 15.5 and 12.2 cm. long (Otago). (Pl. LXXVI. 9.)
  - 77. Fragment of faience tile, 3.9 cm. long (Otago).

Also a fragment of plaster covered with gold leaf showing a row of P's between 1's.

II. The Hall of Foreign Tribute<sup>1</sup> (Pls. X, XXIX). In the preliminary report<sup>2</sup> we have already identified the very damaged ruins, which overlie the northern temenos wall, with a building represented in the tombs of Ḥuya and Meryrē II (see below, Fig. 4 on p. 24). Before, however, we turn to this question, which is one of interpretation, we must discuss and justify the restored plan (Pl. X. 2) which the excavator and Mr. Clark evolved on the basis of the existing remains (Pl. X. 1). This latter plan, together with the photographs, shows that the quarrying of bricks, which effectively destroyed this part of the huge temenos wall, nearly obliterated the remains of our building as well. We shall, however, describe the ruins, point for point, and indicate why we completed them in the way we did.

The existing remains reveal in the first place two open pathways which cross each other just to the south of the centre of the ruins and which have each a stairway at the end leading up to a platform. In the north-east corner, however, are remains which do not fall into the more or less symmetrical design of the remainder. This, we believe, was an independent building, presumably quarters for the man in charge of the structure. The entrance seems to have been in the south-east corner. A small lobby gives access to a room with four pillars (of which three still remain) and a lustration slab with a square limestone sink. In this sink were found the bones of ducks, amongst which a beak was clearly distinguishable. The western half of this subsidiary building has almost entirely disappeared, but the restoration here adopted naturally suggests itself. Not only does it produce a symmetrical design but it also accounts for the two remaining bits of wall of double thickness. The building thus appears as a simple addition to the main structure. The door in the south wall of the building is exactly at the foot of the flight of steps which we have assumed to lead up to the northernmost platform of the main edifice. Of these steps only those on the south of the western platform remain. The pavements of all four platforms, however, are sufficiently well preserved to show that they were certainly above the level of the surrounding ground. Moreover, the symmetry of the existing remains is so remarkable that there can be no doubt as to the existence of the eight flights. In addition, a

<sup>&</sup>lt;sup>1</sup> By Dr. H. Frankfort.

stone threshold is still in situ in the north wall of the main building opposite and a little to the west of the house of the man in charge. This threshold is 50 cm. above ground-level, i.e. not on a level with the platform, to which it does not give access, but exactly at the level which the stairway in front of it would reach at this point if we reconstruct it as similar to the rest (Pl. XXIX. 1).

The main building is inserted into the temenos wall, as is clearly visible at the west end, where the bricks of the latter are actually broken through. Inside the remaining shell of the wall a plastered pit or store-hole has been placed. On the east side of the building it adjoins a thickened part of the temenos wall. This looks very much as if there had originally been the pylon of a gate here, exactly opposite to that mentioned above (p. 6), and as if only so much as was necessary of this gate and the adjoining wall had been broken down for our building, resulting in part of the eastern pylon being left in situ.

The outside of the building was whitewashed, though only scanty traces remain. Just to the west of the western platform a little painted plaster was found, probably a frieze of petals which may have run under a cavetto cornice round the upper edge of the outer walls. The evidence, however, is very slight.

The two cross-passages divide the building into four blocks which differ in their layout. The south-western is too denuded to be intelligible. It is the only block without a surrounding ambulatory, and there is certainly no door in the middle of its north wall. The reconstruction is the simplest which could be made by utilizing the existing remains, but it is obviously largely conjectural.

The south-eastern block is perfectly clear. It is a lustration room. The size of the lustration slab is such that the two bases for the columns which carried the roof are included in it. It has a small circular depression in its southern end, but no sink (Pl. XXIX. 4).

The north-western block possesses two lustration slabs with limestone sinks, one of which is placed in the ambulatory like the three sinks of the north-eastern block in which the ambulatory is screened off from the door in the north wall, so that the servants who emptied the sinks should not be seen by those who entered. Of the lustration slabs connected with these sinks only the northernmost remains (Pl. XXIX. 3).

The southern part of this same north-eastern block is much denuded, and it seems as if stone as well as brick had been removed. The floor of the northernmost of the two rooms behind the screens consists of a rough layer of lime plaster, and one stone slab is still in position upon it. The adjacent walls are also covered with lime plaster. The screens are of whitewashed mud imitating wooden screens with bronze clamps as feet (Pl. XXIX. 2). There was some pink and white plaster here from door-frames or beams.

The afore-mentioned platforms approached by the stairways differ in that those on the east and west have plain openings instead of doors on the inside and contain no pillars, while two stone pillar bases are found on the northern platform and one on the southern. This difference between the platforms has given us a clue to the interpretation of the building.

In the tomb of Ḥuya¹ a ceremony is shown which centred round a building consisting, like ours, of four platforms (Fig. 4). These, again like ours, are differentiated and in the same way.

<sup>&</sup>lt;sup>1</sup> Davies, op. cit. III, Pl. XIV. Cf. in the tomb of Meryrēt II, op. cit. II, Pl. XXXVII, where only one platform is shown, with the king receiving the foreign tribute seated upon his throne under a canopy.

Two, shown vertically one above the other, are merely bearing heaps of offerings. They correspond to our east and west platforms. On the axis at right angles to these are shown two more

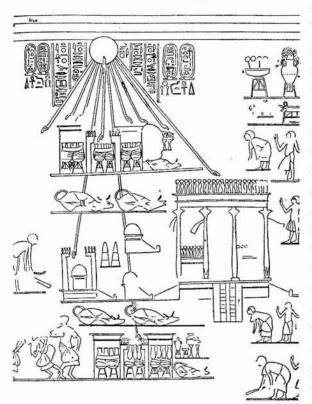


Fig. 4. Representation of the Hall of Foreign Tribute in the Tomb of Ḥuya (Davies, Amarna, III, Pl. XIV).

platforms. That on the left bears a stela, shown behind a doorway; that on the right has columns supporting a canopy. These are our southern and northern platforms respectively. The scene shows the King and Queen carried in a state palanquin "to receive the tribute of Syria and Nubia, the West and the East, all the countries collected at one time and the islands in the midst of the sea bringing tribute to the King on the GREAT THRONE OF AKHET-ATEN FOR RECEIVING THE IMPOSTS OF EVERY LAND and for granting them the breath of life". The words in italic capitals evidently give us the official designation of our building. It indicates that it was constructed especially for the purpose of the great offering of tribute, a fact which agrees with the fact that it was inserted in the temenos wall and also that it was built rather hurriedly, as can be seen from the screens of mud-plastered brick instead of stone. The event is dated to the twelfth year of Akhenaten's reign, and we are possibly justified in seeing in it the result of Queen Tyi's visit of that year and in believing that the old lady forced him to make a parade of empire in the vain hope

of impressing his already rebellious dominions.

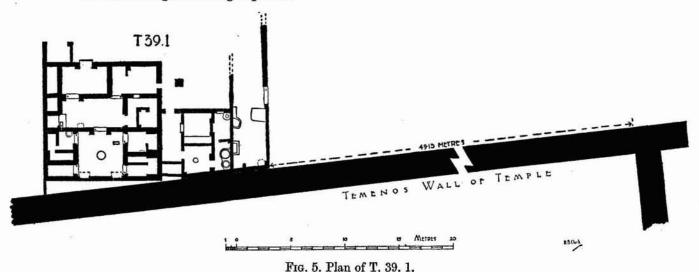
The actual situation on the site enables us to reconstruct the ceremony with a high degree of probability. If a durbar was held as the pictures suggest, it must have taken place on the open space between the North Suburb and our building, this open space being admirably suited for the purpose. Akhenaten and Nefertiti would then have been carried between the rows of ambassadors, slaves and their offerings, finally, to alight at the entrance of our building, either going into the separate structure in the north-east corner or ascending by the stairs in front of it. Instead, however, of proceeding at once to the throne placed under a canopy on the northern platform, they would have entered the north-eastern block by a special door in its north wall just before the platform itself is reached. There is a step down inside that door in the ambulatory and the rooms in the block were no doubt the robing chambers where the ritual ablutions could be performed as a preliminary to the religious ceremony which was to follow. The royal suite and the officiating priests would probably use the remaining blocks of the building for that purpose.

That a religious ceremony formed part of the proceedings Mr. Davies has concluded from the presence of bound sacrificial oxen in the picture in Ḥuya's tomb. Moreover, the actual position of our building, half in and half out of the temenos, is too extraordinary not to have a symbolical significance. One imagines that the tribute was borne in as soon as the royal couple was seated under the canopy of the northern platform and that in a series of progresses up and down the pathways the tribute was offered to the King, who then dedicated it to the Aten. It was thus piled up on the eastern and western platforms, and perhaps on the southern one as well, whence it could easily be transferred to the Temple or Royal Magazines once the ceremony was over.

No objects of any importance were found in the Hall itself. In the corner between the house of the man in charge and the northern platform the decorators had buried their paint-pots and some sherds and a pebble on which they had tried their brushes, the latter showing a vase drawn in red paint.

## OBJECTS

- 26/33. Bronze ferrule containing fragment of gold leaf, 6.5 cm. long (Archaeological Museum, Cambridge).
  - 42. Pebble with vase drawn in red (Bristol).
  - 51. Some fragments of gilt plaster.



III. T. 39. 1.¹ This building, the plan of which is shown in the accompanying figure (Fig. 5), is a house 50 metres west of the east end of the northern temenos wall, see Pl. I). It had obviously been remodelled, some rooms being built on to the east, apparently because they had been cut off from their normal position south of the central room by the temenos wall. It must be explicitly stated that this house does not provide evidence for any occupation of the site prior to Akhenaten's arrival. It corresponds to other private houses in every detail, and the few unimportant objects found here, beads and vases, are identical with those found elsewhere on the site. It certainly seems as if the occupant had established his little dwelling here in the very early days of Akhenaten's occupation, before the temenos wall was built and apparently with the intention of being just outside it. We have already suggested that the depression in the ground just east of the Sanctuary, visible in the aerial survey on Pl. XXIV. 2, was the line originally intended for the end of the temenos. Evidently the owner of our house—perhaps he was overseer of the projected works—imagined his dwelling was quite clear of any possible wall, only to find that a change in the Temple plan was to cause him to remodel his own.

Objects. None of importance, see p. 32.

IV. The Official Residence of Panehsy.¹ This annexe of the Temple was an independent structure but was evidently a state building, since its bricks were stamped with the cartouches of Akhenaten and Nefertiti (Pl. LXXXIII, iv), while those of the estate wall and the outbuildings showed two cankh signs standing for the royal couple. The plan (Pl. XI) is clear. Its exceptional features, viz. the absence of women's quarters, the large magazines (15–20) built up against the house, and the very large kitchens in the right-hand block, were explicable as soon as the name of the owner was discovered, for Panehsy, First Servitor and Superintendent of the Cattle of the Aten, possessed in the main town site a luxurious private estate which was cleared by Griffith.² Between these two houses the path worn in the desert by the passage of himself and his train can still be seen in the early morning and late evening, when long shadows are thrown over the sand. The present building is merely his official residence where he could stay for a few nights when special reasons necessitated his continued presence at the Temple.³ It is rather strange, however, that he has no private door through the temenos wall, the nearest gates being roughly 130 metres west and 150 metres north.

In the Entrance-Hall (at 3 on the plan) and in the Central Room (4, see Pl. XXX, 1) were found fragments of painted plaster utilized in Mr. Clark's reconstruction.<sup>4</sup> In the light of evidence acquired subsequently to this reconstruction we should almost certainly do away with the cavetto cornice round the top of the walls, but should add beams and rafters coated with pink plaster. To the south of the Central Room is a closet (7) which one would take for a lavatory, were it not for the holes in the east and west wall which suggest cupboards (Pl. XXX. 4). In the Central Room (4) the plaster foundations of an altar in the form of a miniature chapel were discovered, together with the greater part of the sculptured façade, which took the form of a door with a broken lintel (Fig. 6; Pl. XXXI).

The total height of the door as reconstructed in Cairo is 92 cm. On the outside there is a rough space to left and right of 8.5 and 8.9 cm. respectively, where the top of the cavetto which connected the lintel with the south wall of the room joined on. On the underside of the two antacaps are grooves for the pivots of a wooden door with a double leaf. The leaves of the cavetto are coloured blue-green-blue-red-blue-green, &c. The hieroglyphs also receive the appropriate colours. The King and Queen wear red sashes. The Queen's necklace has the outer row painted green, the inner row red.

At the extreme east end of the extensive outbuildings (Pl. XXX. 2, 3, 5) there was a room with a platform about 25 cm. high, whether a sleeping-place for servants or a standing-place for goats and sheep is uncertain.

#### OBJECTS

- 26/1, 66, 95, 87. Wine-jar sealings. [87 is Pl. LXXXI, 106.]
  - 2. Fragment of polychrome faience tile, 5.5 cm. long (Fitzwilliam). (Pl. LXII. 2.)
  - 4. Fragment of blue faience showing part of stooping figure, 4.2 cm. long (Fitzwilliam).
  - 21, 44 (Pl. XCVII. 328), 48 (Pl. XCVI. 307), 49 (Pl. XCVII. 316), 62. Hieratic dockets.
  - 63. Fragment of blue faience bowl, 15 cm. long (British Museum).
  - 72. Fragment of faience with part of early Aten cartouche.
  - 80. Fragment of bronze axe-head, 2.2 cm. (Brooklyn).
  - 81, 88, 89. Pieces of unworked carnelian from the eastern magazines (S. Kensington).

<sup>&</sup>lt;sup>1</sup> By Dr. H. Frankfort. See also the Preliminary Report, JEA. XIII. 211 ff.

<sup>&</sup>lt;sup>2</sup> JEA. X. 302.

<sup>&</sup>lt;sup>3</sup> For similar official residences see *ibid*. XVII. 240 ff.; XVIII. 145.

<sup>&</sup>lt;sup>4</sup> JEA. XIII, Pl. XLVII, top.

- 82. Whetstone, 10.3 cm. long.
- 83. Limestone drillhead, 4.7 cm. long.
- 84. Pieces of resin.
- 85. Several thousands of unpierced garnets, from the eastern Magazines.
- 86. Fragment of round faience tile showing calf among reeds, 11.4 cm. (Cairo). (Pl. LXII. 3.)
- 96. Bronze knife, 10.7 cm. long (Bolton).
- 97. Shallow stone dish with runnel, 33 cm. diameter (Auckland).
- 113. Bronze knife with bent tang, 9.5 cm. long (Archaeological Museum, Cambridge).

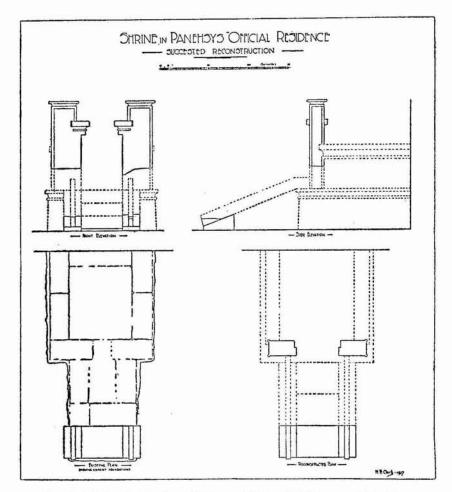


Fig. 6. Shrine in the Central Room of the official house of Panehsy.

The following fragments of inscribed stone were found in, outside the house, in the front hall, &c.:

- S. 91. Lower part of limestone door-jamb showing Panehsy's legs (Cincinnati).
  - 92. Part of door-jamb with four lines of inscription (Wellington). (Pl. LX. 4.)
  - 96. Fragment inscribed with wnn.f.
  - 97. Two small fragments (Merchant Taylors).
  - 98. Fragment with two lines of text (East Anglia).
  - 99. Nine fragments showing hands of Panehsy praying, 1.27 cm. high (Wellington).
  - 100. Fragment with two lines of inscription (San Diego).
  - 103. Small fragment.
  - 107, 118. Fragments with cartouche of Nefertiti.

Also a pottery vase in the form of a bull—a rhyton of Aegean type but not fabric. The figure seems to have worn a uraeus and possibly a disk. (Pl. LXII. 6-9.)

- V. S. 40. 1. This building, the plan of which is here given in Fig. 7, lies 40 metres south of the temenos wall and 250 from its eastern end, see Pl. I. It is rectangular in plan with a square projection at the north end of the east wall. It is well and solidly built of mud brick with stone thresholds. The flooring throughout, except at the south end, is of mud. Apart from the projection to the east it is divided into four divisions by screen walls built between the square brick piers which supported the roof. Both piers and walls are whitewashed. Some 5 metres in front of the building proper runs a wall pierced by doors corresponding to the entrances into the four main divisions.
  - 1. Eastern Projection. This contains a big stone slab 30 cm. thick with a slightly raised

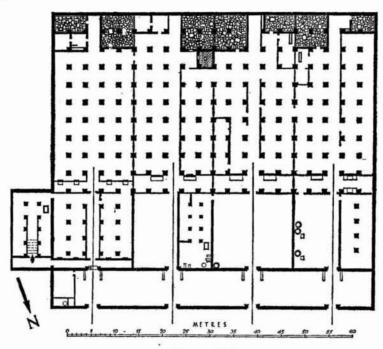


Fig. 7. Plan of S. 40. 1.

edge and a rough surface. Fire-places, too small and fragmentary to show on the plan, line the south wall, and there is a staircase to the roof in the central partition to the north.

- 2. The Main Building: (a) Eastern Division. The entrance from the north has a very well polished pivot stone of black granite set into the stone threshold. On the south side of the crosspassage are pilasters which do not line up with the piers. On the south side of the screen wall which connects them they remain to their full height as buttresses, on the north side they have been cut down to a height of one brick as if to serve as benches. In the main room only the two northern piers of the central aisle, which was probably open to the sky, are connected by screen partitions with the north wall. All along the east wall and against many of the piers are traces of burning. In the south-east corner is sunk a very small furnace. The west side of the south end has limestone paving surrounding a central pier. There are traces to show that both the walls and the pier were faced with stone. In front of the pier is a square stone-lined pit 56 cm. deep set slightly askew. On the eastern side there are fragmentary traces of stone paving at the extreme southern end only.
- (b) Second Division. The entrance to this shows no trace of a stone threshold. The cross-passage is slightly broader than that in the eastern division and has to the south a plaster-

covered bench of brick on either side of the main axis. From the cross-passage access is obtained to a room west of the entrance, the roof of which was supported on small square piers. There were ovens and fire-places at the north end and a shallow oblong stone trough by the west wall. The main room is divided into two by a screen wall to the west of the centre. The eastern division shows considerable traces of burning at the south end and it appears that there were fire-places in a closet which was screened off. The western division has a stone-paved area at the extreme south end similar to that already described. Small column bases have been used in the paving. Immediately to the north of this is a much more regularly paved area only half the width of the last. In this is a smaller stone-lined pit a metre deep (Pl. XXXII. 1).

- (c) Third Division. The entrance-hall to this runs the whole width of the division. It has a furnace in the north-east corner. The cross-passage is like that in the second division. In the main room the central aisle is cut off by screen walls and so is half the eastern aisle. The stone-paved area with a skew-wise pit is in the south-east corner. Here were found bones of oxen and traces of burning just to the north. There is a very good example of the walls being faced with stone. Column drums are again used both for paving and facing. At the south end of the western division are two long whitewashed troughs and a stone-lined pit. The floor is of mud, but the walls seem to have been faced with stone. There are distinct traces of burning (Pl. XXXII. 2).
- (d) Western Division. Here again the entrance-hall is divided into two. On the east side are three ovens and there are traces of square piers in front of them. Perhaps this was open to the sky save for a light roof over the ovens. The western division has a central row of square piers, and there are considerable traces of burning. The cross-passage is as before except that there are benches against the north as well as against the south walls (Pl. XXXII. 3). The two best preserved examples have a slightly raised section in the middle (an arm-rest?) and the back projects slightly from the wall behind. In the main room the whole of the side west of the central aisle is screened off. There is a small room at the south end with traces of stone paving and stone facing for the walls (Pl. XXXII. 4). To the east is the usual paved area against the south wall and in front of it a long whitewashed trough with traces of burning close beside it.

As to what this building was we have no clue save for the existing remains. Nothing corresponding to it is to be seen in the tomb pictures. It is certainly connected with the Great Temple in some way, like the Magazines to be described below. The presence of so many areas with a stone paving and a stone facing for the walls implies a good deal of water being used. These areas are in fact not unlike elaborate versions of the ordinary bathrooms in private houses, and the most plausible suggestion yet made is that of Mrs. Samson that it was a purificatory area for the priests. Whether the traces of burning imply a sybaritic use of hot water and the oxbones and ovens the holding here of feasts we cannot say. If this suggestion is correct the division of the building into four seems to indicate four grades of priests.

# OBJECTS

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36/111. Two fragments of bronze. (Pl. LXXIX. 3.)
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- 131. Limestone disk, 7 cm. diameter.
- 132. Piece of bronze wire, 7.7 cm. long (Pl. LXXIX. 3.) Glass ear stud.

VI. Magazines south of the Great Temple (Pls. XII and XXVIII. 5, 6). These Magazines run some 250 metres along the west end of the southern temenos wall of the Great Temple at a

distance of about 30 metres. The façade to the west is in line with that of the Temple and, although it is extremely broken at this point, the main entrance was obviously here. At its north end this façade wall turns east to enclose a long narrow court which runs right along the north side of the Magazines. It ends abruptly and probably originally continued eastward for some little way before turning south and enclosing a court at the east end. At the west end sheds were built on to the outer face of the wall.

As has been said, the entrance must have been from the Sikket es-Sultân to the west. In the north-west corner of the first enclosure are storerooms with stone thresholds. East of the first enclosure are rather better buildings largely brick paved and giving the impression of living-quarters. The north and south halves of this are divided by a thick wall which cuts through the wall separating them from the first enclosure. East again is an open court to the north of which are a few wretched storerooms. From this court access was obtained to the court to the north off which open the north row of Magazines and also to the passage off which opens the south row. The passage serving the middle row, however, seems only accessible from the east end, though the wall blocking the west end is only one brick high and may have been no more than a threshold.

Not all the Magazines were completely cleared. So few were the objects and so great the expense that in Magazines 4 to 34 in the north row and 12 to 40 in the middle row the walls and entrances alone were determined. In the following notes the Magazines are numbered from west to east and only those which contained any unusual feature are mentioned.

#### A. North Row

- 1. Ovens at the south end. Bin in the north-east corner. (West of this Magazine in an odd corner is a small chamber with a stone lustration slab.)
- 2. Fire-place at the south end.
- 3. Ditto. Bin on east wall.
- 36. Flight of stairs to the east.
- 39. Bins to the south.
- 40. Ovens to the south.
- 41. Twice the size of the others. Traces of burning.
- 42. Bins on the west wall.
- 43. Ovens to the south.
- 44. Ditto.
- 45. Ditto. Bin at the east end.

#### B. Middle Row

- 1. Traces of burning at the south end.
- 2. Brick bench along the east wall.
- 3. Bin along the west wall.
- Three bins with high walls along the west side. Possibly steps along the east wall. Bricked-up room at the south end with traces of burning.
- 8. Oven in south-west corner. Bin in north-east corner. Sunk pot of type XII. 11.
- 9. Ovens at the south end. Bins and possible stairs on east wall.
- 10. Ovens at the south end. Two sunk pots of type XIII. 3.
- 11. Ditto.
- 41. Ovens at the south end. Bins to the west. A low square pier to the east.
- 42. Ditto, but no pier.
- 43. Bin to the east.
- 44. Bin to the west. Fire-place at the south end.

- 45. Traces of square piers.
- 46. Stone threshold. Ovens at the south end. Traces of burning on the floor.

#### C. South Row

- 1. Ovens at the south end. Bin to the east.
- 2. Ovens at the south end.
- 3. Room to the south. Bin in north-west corner.
- 4. At the north end stone paving and facing to the walls. Stone press to the west. Bin to the east.
- 5. Traces of stone paving along the east wall.
- 6. Room to the south with three ovens. Bins to the west. (Pl. XXVIII. 6.)
- 7. Ovens at the south end.
- 8. Stairs to the east. Bins to the west. Ovens and fire-places at the south end. Sunk pot of type XII. 1.
- 9. Ditto.
- 10. Room to the south with three ovens. Bin to the west.
- 11. Racks and bins block the whole passage. Two well-preserved ovens in a room to the south. Window? into 12. Door? into 10.
- 12. Bin in the north-east corner.
- 14. Steps to the east. Many traces of burning. (Pl. XXVIII. 5.)
- To the east of 14 is an open court with rooms to south and west. East again is another court with a stone threshold leading west to a room with three ovens and another court, the north end of which is paved in brick.

#### OBJECTS

## From the approach to the west

- 36/63. Miniature pottery vase and lid, 6 cm. high.
  - 64. Two fragments of faience inlay. (Pl. LXXII. 6.)
  - 65. Fragment of faience.
  - 66. Sculptor's trial piece of sandstone showing a clenched hand, 9 cm. long.
  - 67. Bronze nail, 4.5 cm. long. (Pl. LXXIX. 3.)
  - 68. Alabaster lid, 10·1 cm. diameter.
  - 71. Alabaster roundel, 3 cm. diameter.
  - 72. Fragment of figure in faience, 3.2 cm. long.
  - 84. Two bronze nails, 2.7 and 2.8 cm. long. (Pl. LXXIX. 3.)

## From the Magazines proper

- 32/92. Lower part of face in sandstone, 6·1 cm. high (Glasgow), picked up by one of the workmen on the surface.
  - 170. Circular clay stamp, 8.8 cm. in diameter.
  - 171. Flat bronze dish for brazier, 60 cm. diameter.
  - 172. Bronze ring. 1.8 cm. long (Stowe).
- 36/182. Bronze ring design of  $\underline{d}d$  between uraei. Disk above, collar below, 2.5 cm. long (San Diego).
  - 183. Fragment of fish in faience, 6.25 cm. long.
  - 184. Stone mould for metal amulets, 11 cm. long. (Pl. LXXIX. 10.)
  - 185. Wooden knife handle, 6.5 cm. long.

Ring of Akhenaten of type I. A. 2b.

Miniature clay vases.

Stone weight, inscribed, 9.5 cm. (Pls. LXII. 4; CIII. 49.)

Also many thick pottery bases with a raised bump, about 3 cm. diameter, perhaps from some type of oven.

VII. The Rubbish Heap. This is an extensive but low mound lying to the east of the Magazines. Some previous explorer has dug a deep trench right through it which can be seen on the aerial survey (Pl. XXIV. 2) though no court has appeared. The surface is covered with broken sherds much weathered and almost shapeless. No fragments of faience or other material are visible as they are on the eastern rubbish-heaps (p. 142) and the section of the excavated trench shows merely an accumulation of sand. It seems, therefore, that this is another example of the extraordinary way in which sherds will come to the surface. We imagine that the broken pottery from the Magazines was thrown here, and that in some way, well known as a fact to archaeologists but inexplicable to anemologists, the sand accumulated by them on occasions when a south-east wind blew was forced underneath them. No objects and no distinguishable sherds were found.

# SUMMARY OF UNIMPORTANT OBJECTS FROM THE DEPENDENCIES OF THE TEMPLE

S. 39. 1

33/2. Fragment of bone. 3. Fragment of gilded wood. 76. Bone weaving tool. 78. Fragment of wood inscribed with later Aten cartouche and Akhenaten's name. Rings I. C. 5 (2). Pendant IV. C. 13d. Mould XXV. Beads VIII, XIX, XX, XXXIII (3), XLV, LXV.

The Hall of Foreign Tribute

26/34. Fragment of gold foil. 56. Pottery reel. Bead XXVIIIa.

T. 39. 1

26/ Pendant IV. A. 10.

The Official Residence of Panelisy

26/3. Alabaster fragment. 5. Small rough clay vase. 6. Rough flint. 40, 50, 93. Sherds with scrawls in red ink. 41. Fragment of painted pottery. 60. Bronze scalepan. 69. Fragments of gilt plaster. 90. Rough flint knife. 91. Bronze awl. 99. Fragment of wood. 100. Five fragments of copper. 109. Fragment of painted wood. St. 101, 102. Fragments of stone jambs, &c. Rings I. C. 5 (several), I. C. 32. Beads XIX (3), XXIV, XXXII (5).

S. 40. 1

Pendants IV. C. 6, IV. C. 7 (2). Inlay 465. Beads XXIV (2), XXV (3). Pottery XV. 22 (2).

The Temple Magazines

1. Approach

36/69. Limestone ring. 73. Alabaster lid. 74. Fragment of black granite. 85. Fragment of sandstone. Ring I. B. 17. Pendants IV. C. 1, IV. C. 7 (2), IV. C. 13. Beads VI, XXII, XXIV, XXIX, XLI (2), XLIII. Pottery XII. 1, XIV. 2 (5), XV. 23.

2. Magazines proper

36/186. Bronze rod. 187. Two fragments of limestone. Rings I. C. 5 (2), I. C. 11, I. D. 35. Pendants IV. B. 6, IV. C. 6, IV. C. 7, IV. C. 11, IV. C. 13b, IV. C. 19 (2) Mould I. C. 5. Beads VI (2), VIII (2), XVIII (2), XIX (2), XXII (6), XXIV (3), XXXII (3), XLVII. Pottery IV. 3, IX. 7 (several), IX. 15, XI. 3, XII. 1 (3), XII. 2 (2), XII. 3 (13), XIII. 10 (4), XIII. 13, XIV. 2, XIV. 5, XV. 3, XV. 6 (several), XV. 22 (several), XV. 23 (many).

## CHAPTER IV

## THE GREAT PALACE

This gigantic building, which extends for nearly 700 metres along the west side of the Sikket es-Sultân, was partially excavated by Petrie in 1891. His results will be given in the appropriate place. Our excavations required over two seasons' work to complete, partly owing to the great depth at which the foundations lie, but mainly owing to the necessity of extreme caution, since we were faced with a system of building the complexity of which we had to learn as we progressed and which differed in many ways from any building existing on this site or any other excavated either by ourselves or by our foremen.

Before we begin to describe the remains which we discovered, one or two words as to the preservation of those remains may not be amiss. On the whole the foundation plaster, whether for walls or floors (for the same system was used as that already described in Ch. II), was in admirable condition in spite of the wanton destruction, which had been even greater here than in the Temple. On the whole these foundations—or the filling above them—had kept back the modern cultivation in a surprising manner. It is only during the last forty years or so that any great encroachment has taken place, as can be seen from Petrie's plan. Near the cultivation, however, the plaster is apt to rot owing to the seepage from the river resulting from the great depth at which it lies. At high Nile the level of the river is slightly (a matter of under a metre) higher than the deepest foundations, which in spite of about 250 metres of intervening soil has caused the disappearance of, at any rate, the stone marks on the plaster, though, no doubt, owing to this same damp the actual stones themselves are more often left in situ.

# I. THE PALACE

[General Description. The Palace, which lies on the west side of the Sikket es-Sulţân and which presumably occupied the entire space between that road and the river, is surrounded by a stout brick wall. To the original nucleus, which embraces by far the greater part of the Palace, were added at the south end, in the reign of Smenkhkarē, a number of additional halls, surrounded by another brick wall, to which we have given the general name of Coronation Hall: this additional section was built somewhat to the east of the main north-to-south axis because the buildings O. 42. 1 and 2 were already in existence. The entire Palace, which formed part of the wider entity called "The House of the Aten" (Pr 'Itn), appears to have borne the name "House of Rejoicing of the Aten".

This immense building can be divided into two main parts: A, the more private quarters,4

Petrie, op. cit., Pl. XXXVI.

<sup>&</sup>lt;sup>2</sup> [The plan of the existing remains will be found in Pls. XIII, A, B, C; our restored plan of the excavated portions forms Pl. XIV. The letters inserted at appropriate points in our description and reconstruction of the Palace refer to the corresponding letters in Pls. XIII and XIV, but the letters E-H, in the Northern Harem, will be found only on Pl. XIV.]

<sup>&</sup>lt;sup>3</sup> [A discussion of the names of the Palace and some of its component parts will be found below, pp. 193-7.]

<sup>&</sup>lt;sup>4</sup> [The private apartments of the King and the Royal Family were in the King's House, a part of the Royal Estate (see Ch. V) which lay on the east side of the Sikket es-Sulțân and which was linked with the State Apartments of the Palace by a bridge.]

built of brick, which may be subdivided into (1) the Servants' Quarters, (2) the Harem Quarter, (3) the Magazines, &c.; and B, the State Apartments, comprising from north to south the somewhat mysterious Weben-Aten, the great parade ground or Broad Hall, a number of pretentious halls and courts immediately to the south of the Broad Hall, and the Coronation Hall. With the exception of the Coronation Hall, which is entirely of mud brick, the State Apartments are built of stone. Two other groups of buildings evidently dependent on the Palace will be described in their proper place (below, pp. 80–82): at the south end two groups of heavy cement foundations for pavilions, O. 42. 1 and 2, and at the north end the remains of a sculptors' workshop almost opposite the entrance to the Great Temple.<sup>1</sup>

The Private Quarters occupy the entire length of the east side of the original nucleus and are bounded on the east by the brick enclosure wall of the Palace, and on the west by the stone wall of the State Apartments. The east and west walls of the Harem are set back slightly so as to form a narrow guard-passage similar to that in the Palace of Ramesses III at Medīnet Habu. The northern section of this area is occupied by rooms which we suggest were servants' quarters and workshops. South of these, extending from D on the plan to the Bridge, are the Harem Quarters, divided into northern and southern sections, of which the northern is by far the larger, by courts with entrances at K and L leading to the road and the Broad Hall of the State Apartments respectively. At L Mr. Pendlebury suggests there was a Window of Appearances. From the Bridge southwards to the south wall of the original nucleus was a group of magazines and other rooms, halls, and courts of uncertain function.

The central portion of the Palace, a large area approximately four times (160 metres) the width of the Private Quarters with which it is parallel, is occupied by the State Apartments and the courts that give access to them. The first remains encountered at the north end are the lamentably confused and damaged foundations of Weben-Aten (X on the plan): it is impossible to reconstruct this building, but it is reasonable to visualize it as consisting essentially of two imposing pillared constructions flanking a portal that led from a northern court, now completely lost under the cultivation, to the Broad Hall. The latter is a spacious court or parade ground with colossal statues of the King and Queen to east and west; the south side of the court was originally planned as a vast colonnade with colossal statues between the columns, but this plan was never executed and only the statues were erected. In the centre of the south side was a small pavilion (Y) with four rows of columns. To east and west of the pavilion ascending ramps lead to the courts and pillared halls that form the State Apartments proper, and to the south of these, built against but outside the original south wall of the Palace, is the Coronation Hall erected by Smenkhkarē.

Barely half the Palace has survived, for practically the whole of the west half of the building and an uncertain proportion of the north end lie permanently buried under the modern cultivation. It may be presumed, however, that originally the Palace extended at least as far as the supposed sculptors' workshop to the north, for it seems incredible to our modern, Western minds that such workshops should have been tolerated at the northern approach to the Palace and opposite to the main entrance to the Great Temple if they were really independent buildings. The plan of the Palace is so symmetrical that we will hardly err in assuming that immediately to the west of the State Apartments was a block of buildings similar in extent to the

<sup>&</sup>lt;sup>1</sup> [Too fragmentary to be plotted and therefore not included in any of our plates.]

Private Quarters: there is good reason to suppose that this western portion had a frontage on the river and that on the side facing the river there may have been a colonnade.

All the entrances preserved are on the east side of the Palace: three gates (A, B, and C) north of the Harem give directly on to the road, as does a fourth (K) between the Northern and Southern Harems. Finally, the Bridge provides a direct link between the King's House on the east side of the Sikket es-Sultân and the State Apartments, with stairs (Q) on the south leading to the Magazines. It was apparently impossible to proceed directly from the Bridge to the Harem. That these, together with other doors on the west leading from the river, should have been the only entrances is surely incredible, and since the whole Palace is oriented to the north, we may safely assume that the main entrance system lay somewhere to the north in the area which is now buried for ever.]

# A. THE PRIVATE QUARTERS, &c. (Pls. XIII A. 1, 2; XV. 1; XXXIII-XXXV. 2)

The whole of the east side of the Palace consists of a line of buildings in mud brick between 35 and 40 metres wide, bounded on one side by the main east wall of the Palace, on the other by a stone wall which shuts them off from the State Apartments. Since in every case we have been able to check, the building as a whole is completely symmetrical, we are almost certainly justified in assuming that a similar line of buildings, perhaps fronted by a colonnade, ran down the whole of the river frontage to the west, which is now well under the cultivation.

The extreme north end of the Palace is much denuded. There seems to be a heavy buttress at the north-east corner. Inside the wall the first 25 metres presents a confusing tangle of foundations much broken by contemporary rubbish-pits, in which were found a quantity of mud sealings for jars of sweet oil.

## 1. The Servants' Quarters (Pl. XIII A. 1; XXXIII. 1, 2)

The first distinguishable group of buildings consists of a number of small houses similar to those of the Workmen's Village, though rather better appointed.<sup>2</sup> The three northernmost dwellings are entered from the west and the doors of two of them have disappeared under the cultivation. In the central house the two inner rooms are paved with a mixture of brick and stone. The southern one is rather better preserved. There are stairs to the north of the central room, traces of red paint on some of the bricks, and a cobbled paving in the inner room to the south.

To the south of these the thick east wall of the Palace is pierced by a gateway between pylons (A). The stone threshold shows sockets for the pivots of the double doors, a central socket for bolting them tight shut and two others for fastening the leaves slightly ajar. Behind the threshold on one side is a block of stone with a socket, no doubt balanced by one on the other, to hold the doors wide open. The court which this big gateway served has been blocked by what seems to be an intrusive set of buildings similar to the last. These are grouped round two sides of another court which must originally have formed part of that inside the gate. The easternmost of these houses has two thresholds which seem to indicate that the door-jambs were fronted with wooden planks instead of being plastered and painted, for oblong sockets are cut in the stone on either side.

The three houses to the west of the court need little comment. The easternmost has the granite stand for a bed-leg let into the stone threshold as a pivot block. The central house had

<sup>1</sup> Davies, op. cit. V, Pl. V.

<sup>&</sup>lt;sup>2</sup> For the Workmen's Village see the plan C. of A. I, Pl. XVI.

two columns in its central room (diameter of stone base, 50 cm.; diameter of wood column from marks left on the stone, 23 cm.). The western house is entered like the rest from the north, but runs east and west instead of north and south. There may have been other houses beyond, but the area is denuded.

To the south of this group is another. This is of better construction and has consequently survived in a more complete condition. Of the eleven houses of which it consists, six lie to the south and five to the north of a long central passage off which they open. The entrance to this passage is lost under the cultivation. It was probably reached by a passage from the bigger court to the north which, as we have seen, was later partly overbuilt. On the north side the eastern house contained no traces of columns. To the east of the entrance-hall was a mud-lined cellarette, oval in shape. The eastern of the two inner rooms alone boasted a stone threshold. The entrance-hall of the second house contained two column bases (45 cm. the stone, 21 cm. the wood). Both the column bases of the central room had disappeared. The third house also had two column bases (50 and 28 cm.) in the entrance-hall, as well as a stone lustration slab with an outlet running into a small basin against the west wall (Pl. XXXIII. 1). There seem to be traces of a brick dais against the east wall. A small stone column base 28 cm. in diameter implies the presence of a loggia on the roof, for all these houses possessed a staircase. The central room contained a single column base (70 and 30 cm., the centre being hollowed to receive the wooden column). Both the inner rooms have brick supports for shelves against their west walls. The fourth house was the largest of the whole group and must have belonged to an overseer. There is an entrance lobby where were found the bases (35 and 17 cm.) of the two columns which had supported the roof of the entrance-hall. In the central room only one of the two bases survived (65 and 33 cm.). To the east of this is another largish room corresponding to the second reception room of the ordinary private house. Practically all traces of the building west of this have disappeared save for the stone threshold. Of the southern group (Pl. XXXIII. 2) the easternmost house is much denuded. The second one has a plan scratched on the stone threshold. There were two columns, the base of one of which was found (60 and 29 cm.) in the entrance-hall. The central room also had two columns (59 and 25 cm.), the red paint from which still showed on the stone. The third house had a single column of which the base had disappeared in the entrance-hall and one in the central room which had likewise disappeared. Here was found a small base 30 cm. in diameter from a loggia on the roof. The westernmost of the inner rooms had a floor covered with white plaster. The fourth house was much denuded. There seem to be traces of a single column in the entrance-hall but none in the central room. The fifth and sixth spaces are so denuded that it is hard to say whether they were houses or courtyards. In the fifth a small base (40 cm. with hollowed centre 21 cm.) was found lying loose. All these houses had brick floors.

South of these houses there are traces of another entrance between pylon towers (B) from the Sikket es-Sulţân which led to two courts off which opened a series of magazines. The whole area had been paved in brick. In the western of the two courts were found a few fragments of stone column bases which may have come from the servants' houses just described. In the south-west corner of the court were a series of storerooms filled with supports for shelves. Along the west side runs a heavy brick wall which bounded the whole of this area.

A little to the south the east wall of the Palace is again pierced by a big gate between heavy pylon towers (C). This doorway had been bricked up, but the door itself seems to have been

allowed to remain for some time, since one of the pivot holes was left uncovered. The back wall of three long magazines lies immediately in front of the door, leaving only a narrow passage. These magazines were entered from the west and traces of their stone thresholds survive. Originally, no doubt, the gateway opened into a big court into which the magazines and a number of other walls, some pretty heavy, were introduced. The whole of this area was covered with pieces of broken plaster and chips of stone. Evidently much of the mortar and plaster for the Harem to the south was mixed here, and much of the stonework at least roughly worked out.

#### **OBJECTS**

- 36/36. Wing from sandstone relief, 10 cm. long.
  - 42. Sculptor's trial piece of limestone with human face, 8.4 cm. high (Ashmolean).
  - 43. Wing of a bird in blue and green faience for inlay into an inscription, 4.6 cm. high. (Pl. LXXII. 6.)
  - 45. Fragment of yellow sandstone showing human hand in relief at one edge, 17-2 cm. high (Ashmolean).
  - 46. Fragment of faience plaque showing wing of a bird, 5 cm. (Pl. LXXII. 6.)
  - 47. Alabaster lid, 8.5 cm. diameter.
  - 48. Alabaster vase of baggy shape, 8.5 cm. high (Otago).
  - 49. Large bronze nail and piece of bronze wire, 10.5 and 8.8 cm. long. (Pl. LXXIX. 3.)
  - 50. Alabaster roundel, 2.8 cm. diameter.
  - 51. Handle of Cypriote sherd, 7.7 cm. long (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 6.)
  - 53. Sculptor's trial piece in limestone showing human head, 17 cm. high (Brooklyn). (Pl. LXXI. 9.)
  - 54. Group of monkeys in limestone, 6.5 cm. high (Brooklyn).
  - 55. Large fragment of ribbed faience for wall tile, 10.2 cm. long (Glasgow).
  - 56. Two fragments of faience plaques showing a fish, one showing fruit (Stockholm). (Pl. LXXII. 6.)
  - 57. Bronze ring inscribed with the name of Akhenaten, 2.2 cm. high (University College).
  - 58. Part of bone weaving tool, 8.1 cm. long.
  - 59. Foot and sandal of limestone statuette, 9 cm. long (San Diego).
  - 60. Large bunch of grapes in blue faience for fitting on to a beam, 8-6 cm. high (Brooklyn). (Pl. LXXIX. 6.)
  - 61. Two large tubes pierced at intervals, ? part of a Roman pen case, 6 cm. long (University College). (Pl. LXXIX. 3.)
  - Neck of Cypriote bottle, 8 cm. long (Museum of Classical Archaeology, Cambridge). (Pl. LIX. 6.)
  - 75. Fragment of alabaster jar, 9 cm. long.
  - 88. Bronze ring inscribed with the name of Akhenaten, 2.5 cm. high.

The following objects were found in the three long magazines and the area to the south:

- 34/30. Clenched hand of colossal red granite statue, 11 cm. across (see below, the "Broad Hall", 34/175).
  - 32, 35. Uraeus from colossal red granite statue, 16.4 cm. high (see last) (Cairo).
  - 33. Head of uraeus in sandstone, 10.3 cm. long (see last).
  - 34. Alabaster vase of baggy shape, 12.2 cm. high. (Pl. LXXIII. 8.)
  - 36. Fragment of blue faience wing for inlay, 2.5 cm. long (East Anglia).
  - 37. Head of uraeus in blue faience, eyes of blue glass surrounded by gold foil, 2.7 cm. long (Manchester).
  - 38. Faience knob of a casket, shaped like a lotus, 2.6 cm. high (San Diego).
  - 39. Sculptor's trial piece in limestone, on one side head of Nefertiti, on the other various hiero-glyphs, 23 cm. long (Brooklyn). (Pl. LXIII. 5.)

- 41. Sherd and handle from Late Helladic IIIa pilgrim flask.
- 45. Two sherds from Late Helladic IIIa stirrup vase (Brooklyn).
- 46. Fragment of plaster inscribed with ♥ sign in ink, 7.2 cm. high (Manchester). (Pl. LXXII. 4.)
- 47. Part of limestone relief showing a princess, her name missing (East Anglia).

Also faience ring inscribed with the name of Akhenaten, Type I. A. 2a. Pendant cartouche with the name of Akhenaten, Type IV. E. 1.

Also outside the north-east corner of the Palace. 35/561. Bronze fish-hook, 3 cm. long.

- 2. The Harem Quarter, extending from D on the plan to the Bridge, has been built about  $2\frac{1}{2}$  metres within the main east wall of the Palace, leaving a passage which could be patrolled. A similar passage is left to the west between the Harem and the east wall of the State Apartments. At the north end of the block is a series of small rooms of which the foundations only remain. It is possible that they could be entered by a very narrow door from the north. More probably, however, the gap in the wall is due to the disappearance of the bricks. A large number of thresholds was found, every one lying loose in the sand. These rooms and those to the south containing square brick piers must have been the quarters of the servants directly connected with the Harem.
- (a) Northern Harem (Pls. XIII. A. 2 D-J; XIV). To the north of the Harem proper is a garden court (see the isometric reconstruction, Pl. XV, top; also the photograph, Pl. XXXIII. 3). The garden itself is surrounded by a path bordered on the inside by oblong tree-pits filled with Nile mud. Within this is a strip with whitish mud paving where are traces of flowerbeds. In the centre is a sunk garden reached from the middle of each side and from the south end. The steps down to it have disappeared. At the north end is a big oblong tank originally lined with stone. At the south end is a well to which a spiral staircase descended. Petrie (op. cit., Pl. X, with pp. 9 f.) found the stone coping of this, which bore the name and full title of Nefertiti. He also mentions fragments of stone columns, bearing reliefs of the royal family, which came from here. These, however, are more probably to be attributed to the colonnade immediately to the south. Almost certainly, on the other hand, the well was covered by a kiosk, since a small column base, 50 cm. in diameter, supporting a red-painted wooden column (diameter at base 23 cm.) was found just to the west. Also traces of a stone conduit were discovered leading from the well to the tank.

The garden proper was surrounded by a wall, gaily painted outside with scenes of the Nile, which is shown flowing between banks of black mud. The wall was probably for the most part comparatively low, since light was needed for the surrounding colonnades, but we suggest that square brick piers ran up to support the roof over the colonnades, and the position of the piers, one in front of each column, is confirmed by the fact that wherever human figures appear on the painting and would need a considerable height to allow them to stand upright, there is always a column in the passage behind. This practice of painting the outside of walls exposed to the weather is very rare. The only other comparable instance is the north wall of the King's private house (below, p. 88) where the feet of human figures can be seen.

Behind each of these walls runs a colonnade off which open small compartments (Pl. XXXIII. 4). In the east colonnade ten out of the fourteen column bases remain, as well as the bases of stone antae, one at the north end and two, one on each side of the last column, at the south end. Each base is carved from one stone in such a way as to include 6 or 7 cm. of the column above it. The diameters are 95 cm. for the bases and 55 cm. for the bottom of the

columns. These latter varied slightly in the number of flutes (Pl. XXXIII. 5, 6). Our reconstruction of them differs slightly from that of Petrie (op. cit., Pl. VII). The interior of the screen

wall is painted with a panel pattern for two-thirds of its length (Fig. 8). To the south, however, is a very fragmentary design, apparently of baskets on a wicker stand.

The small chambers which open off the colonnade were probably used for storage purposes. At the back of each one are the remains of heavy brick piers to support a broad shelf, while in some are narrower supports along each side. They are whitewashed throughout with occasional traces of bands of yellow or red. The doors were framed, some in

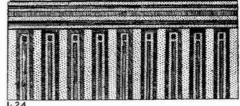


Fig. 8. Panel pattern on screen wall in the North Harem.

plaster, some in stone. The bases of two of the fluted stone jambs were *in situ*, and cavetto cornices from over the door were found in both stone and plaster, the fronds being blue, red, blue, green, blue, red, &c., on a bright yellow background. The width of the doors can only have been 60 cm.

The walls were all plastered and painted. On the south wall of the colonnade by the entrance to the corridor leading south were two huge bunches of grapes in black and blue heaped on red dishes (Fig. 9). Apparently there were two more above. The background was yellow and extended as far as the south jamb of the first closet. The space between the first two closets is occupied by the anta. Between the second and third is painted a row of six wine jars with mud sealings. Between the third and fourth closets are a blue and a black horizontal band on the yellow background and above them the lower part of a series of round-bottomed vases or baskets painted red. Between the fourth and fifth are blue and green bands surmounted by traces of similar vases. Between the fifth and sixth are bowls containing smaller

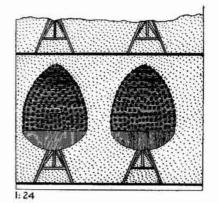


Fig. 9. Wall decoration in the North Harem.

vases. Between the sixth and seventh nothing but the blue and red bands at the base is distinguishable. Between the seventh and eighth appear the outlines of tall narrow jars. Between the eighth and ninth nothing but the lower part has survived, and from there on the face is almost completely destroyed. Petrie (op. cit., p. 15) saw a box with a sloping lid painted in black and white on a red ground on one of these walls.

The western colonnade, in which only the southern eight columns have survived, seems to have been almost identical, though this area is denuded down to the foundations. Both at the north and south ends the antae are on either side of the last column. The outer side of the screen wall was painted with a scene perhaps similar to that opposite, but it is so ruined and weathered that only a few large objects of dark brown on a yellow background can be made out. Within the colonnade itself a series of bins is formed by means of low partitions of brick (Pl. XIII A. 2) painted on the outside with red and blue horizontal bands on a white ground; they

<sup>&</sup>lt;sup>1</sup> Six more sealings are shown in the intervals. The background is yellow. The jars are pink outlined in deeper pink and the mud sealings are white. The total height to the top of the sealings is 60 cm. At the sides is a border of white edged with black and 20 cm, at the bottom is whitewashed.

run right up to the shaft over the base. The closets opposite are much ruined and the brick floors have almost entirely disappeared. The walls between the doors show traces of a panel pattern similar to that on the east side of the east screen wall.

At the south end was a double row of columns fronting directly on to the garden. The bases were 90 cm. in diameter and a very deep central socket for the shaft was 27 cm. This socket implies that the shafts were of wood, but since fragments of stone shafts, differing from those of the east and west colonnades in bearing reliefs of the royal family, were found in this area, it is possible that the wooden shafts were later replaced by stone. The brick paving of this colonnade stops short a metre from the south end. Since the room to the south is 60 cm. higher in level and there seems to be no trace of a wall, it is conceivable that a flight of stone steps descended at this point into the colonnades. Three steps of 15 cm. height and 33 cm. tread would suffice.

The long cross-hall (E) which contained the famous pavement has been described at length by Petrie (op. cit., pp. 8–13). Briefly, there were two rows of eight columns, the bases 90 cm. in diameter. Down the central gangway on the main axis of the Harem the floor was painted with figures of bound captives, alternately Asiatics and Negroes. Between the two rows of columns on either side was represented a rectangular pool containing fish and lotuses. Wild fowl are shown fluttering over the surface. In the space between the columns wild fowl and calves are seen among the marsh plants, the reeds, sedge, and papyrus. A similar band runs round the outside, while as a border to the whole is a band of bouquets of lotuses and papyrus in tall vases alternating with bowls placed on stands. There was some indication of an earlier pavement, for at intervals a different scheme of decoration appeared below the upper design where it has worn through. On the east wall of this colonnade was a dado of the usual panel pattern, above which appeared a series of figures painted on a yellow background. The scene depicted the arrival home of the master of a house and the preparations made for him by his servants (Petrie, op. cit., Pl. V, with p. 14).

South of this cross-hall is a large nearly square room, the floor of which Petrie found much destroyed (op. cit., p. 14). Here he noted traces of a similar pavement as well as of a pathway of captives coming from the room with the twelve columns (F) to the east. No column bases were found, though such must have existed and have been added in the restored plan, Pl. XIV. In the excavations of 1934 a pathway of captives was found to run from south to north along the main axis as well as from that just mentioned east to west. Considerable remains were found of the rest of the pavement, the design consisting mainly of ducks flying over the marshes, the whole bordered by flower vases.

Flanking these halls were other rooms. Those to the west were denuded to the foundations, but enough was left to show that there were three largish rooms each with two small closets to the south. The columns in the restored plan (Pl. XIV) have been added to conform with the similar rooms on the other side. These rooms had no access to the main halls and were reached only from the west colonnade of the garden court. On the east side<sup>2</sup> were two rooms of similar

¹ The matter is confused owing to the fact that the walls of the building erected to protect the famous painted pavement were built largely of ancient brick and were placed on the ancient line at this point. Furthermore, the wall which banks up the substructure of the room with the painted pavement has been repaired in modern times. A very careful examination, however, failed to reveal a single certain case of this wall rising above the level of the floor.

<sup>&</sup>lt;sup>2</sup> These rooms were not re-excavated. The plans and description are taken from Petrie (op. cit., Pl. XXXVI, with pp. 9-14).

type, each containing one central column base. These were approached by a corridor opening off the east colonnade of the garden court, but were also connected with the adjoining main hall by a small lobby. South of these is the already mentioned large room (F) containing twelve columns; these were inlaid with faience. Down the central aisle runs a pathway of captives, which turns towards the north end and enters the main hall in the manner above described. The rest of the pavement is in a style similar to that in the cross-hall (E), but of worse execution and in worse condition. The small room to the south of this (G) has a pavement painted with flowers in vases. To the south of the main hall is a corridor (H) off which open five rooms to

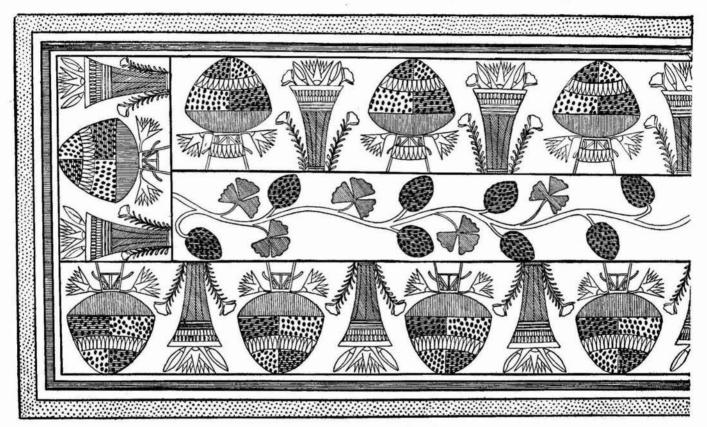


Fig. 10. Painted pavement in the North Harem.

the south and one to the west.¹ This part is much denuded. It may have been accessible from the south, where there seem to be other small rooms, the entrances of which cannot be made out. All the pavements are painted. The design in the southernmost rooms is too broken to be made out, as are those in all but the most easterly of the five closets. In the latter were shown clumps of papyrus in blue. The pavement of the corridor consisted of a series of panels containing vine stems bordered by flowers in vases and baskets (Fig. 10). The room to the west contained only fragments of ducks and flowers, but the floor of the lobby (J) to the north was in a better state of preservation and showed clumps of flowers grouped in pairs (Fig. 11).

Davies (op. cit. VI, Pl. XXXIV, with p. 36) makes a gallant effort to identify various pictures of different parts of the Palace with the remains excavated by Petrie. Two of the most

<sup>&</sup>lt;sup>1</sup> This may be a lobby leading to the corridor (J). The cross-wall at the north end (Pl. XIII. A. 2) may have had a door in it, and the corridor (J) may well have had access to the main hall.

detailed drawings will be found in the tombs of Ay (Fig. 12) and Tutu (Davies, op. cit. VI, Pls. XVII, XIX). Save that both pictures clearly represent the Harem and the north part of the Palace, they help us little. In Tutu (Davies, op. cit. VI, Pl. XVII) a painted pavement

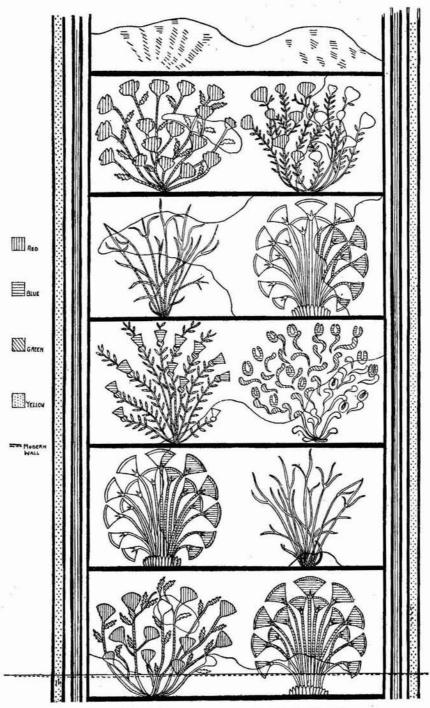


Fig. 11. Painted pavement in the North Harem.

seems to be shown, and in Ay (Fig. 12) are columns decorated with hanging ducks. It is most surprising that the great State Apartments (see below) are never represented nor, save possibly an indication of trees in Fig. 12, is the garden and colonnade of the Harem. The only explanation lies in the insistence of the King on his private life and also on the fact that those

parts which he desired to be pictured were the very last to which the artist would be allowed admission.

South again is an open court, at the east end of which seems to be a small self-contained unit consisting of a Central Hall with two rooms to the east and one to the south. In the south

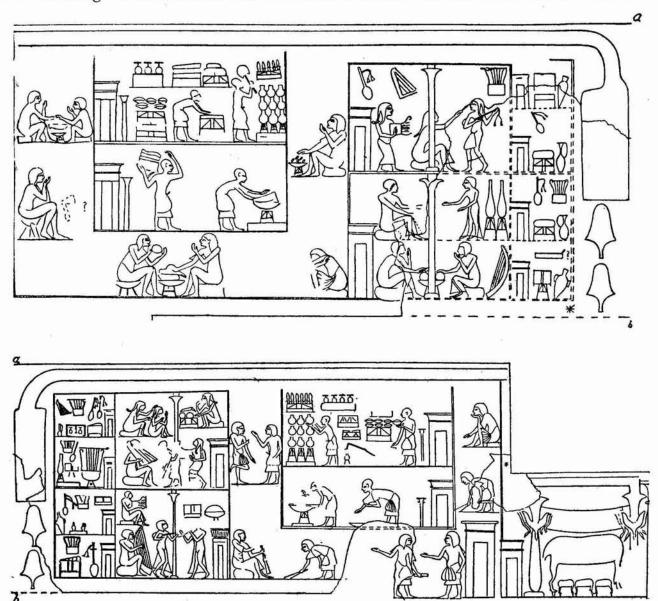


Fig. 12. Representation of the North Harem in the tomb of Ay (Davies, Amarna, VI, Pl. XXVIII).

wall of the Central Hall is a niche or false door balancing the door on the same side. How this part is entered is unknown.

This northern block of the Harem is divided from the southern block (see below) by an important entrance (K) in the east wall of the Palace. The main gate is flanked by pylon towers. A broad brick ramp from without leads up to a heavy stone threshold, from which another ramp descends to an open court, on the opposite side of which—exactly lining up with the gateway—is what seems to be a Window of Appearance (L) (described below, pp. 52, 76, under State Apartments, &c.). To the south of the inner ramp is a number of broken walls which may

be those of guardrooms. To the north of the main gate is a postern. This is flanked outside the Palace wall to the south by a small two-roomed porter's lodge with a stone threshold and curious buttresses of mud outside the north wall, which are whitewashed with a central roll painted red (Pl. XXXIV. 1). To the north of the postern there seems to be first an ordinary cottage of the Workmen's Village type with a stone trough in the eastern of its two inner rooms. North of this again is another similar dwelling with rather more rooms, apparently entered from the east by a door now bricked up. Outside the north wall of this is a refuse bin. Inside the postern are two bins. From the courtyard which it enters, a winding passage leads off in the north-east corner to the guard passage, which runs the whole length of the Harem between it and the Palace wall. For further protection there was a doorway with a stone threshold at the point where the Harem proper begins.

(b) Southern Harem (Pls. XIII A. 2; XIV; XXXIV. 2-4). What we have termed the Southern Harem lies to the south of this entrance system. It was partially explored by Petrie (op. cit., p. 14). This was entered from the north. In the centre is a long garden court running north and south and giving directly on to the Bridge (see below, p. 56). The garden itself is sunk and stone steps lead down into it from the south. It was filled with Nile mud and was apparently watered by means of a trench which runs from the entrance above mentioned into its north-west corner. Round it runs a path. Rather to the north of the centre a court (M) opens to the east, a layer of plaster with the markings of blocks probably indicating the position of a stone threshold. This open court is paved with bricks. Not quite in the centre is an oblong tank lined with plaster which shows the marks of stone round the edge. In the middle of this was found a great oblong slab of concrete slightly askew (Pl. XXXIV. 3). It may have been an ornamental pond with some central structure. To north and south of this court are colonnades probably like those on either side of the garden court in the North Harem, since fragments of similar but smaller columns were found. There were three columns in each (80 and 45 cm.) and a stone anta at each end. Four chambers open off each of these corridors, the easternmost in each case being slightly wider and containing stairs leading to the roof. Those to the north show brick supports for shelves, those to the south were empty. These latter seem to have been larger at one time and the foundations of the original design lie visible to the south, where they are confused with other foundations which are probably those of a shed erected while the place was being built. In its latest stage this area was an open court entered from two of the southern compartments. In its south-east corner is a small cottage of the usual three-roomed type. The whole of this block is set back from the surrounding walls, leaving a clear passage.

To the west of the garden there are traces of plaster which may imply a stone paving. Behind this are the sunk foundations of a stone wall, which acts as the east wall of a colonnade (N) of two rows of eight columns. To the west of this were two further rooms each containing four columns. The bases had been set on sleeper walls which broaden out at intervals in order to support them. Or rather should have done so, for the bases rarely coincide with their supports! To the north and west of these are other rooms. All these rooms have painted pavements. Along the north side of the block runs a corridor, its north wall retaining traces of a life-size

<sup>&</sup>lt;sup>1</sup> We must not forget the possibility of a fountain. There is no representation of one, but the Minoans were familiar with the principle in the L.M.Ia period, see Evans, *Palace of Minos*, II. 460. The limestone fish may have been part of its decoration (see below, 35/395-7, Pl. LXXIII. 4).

male figure, of which only the feet remain, and a river scene; its south wall decorated with pictures of a chariot and a ship. This also had a painted pavement. It turns south, and after passing a small chamber reaches a door which leads eastwards into the block of buildings already described. At the extreme south end brick stairs have been added over the painted floor. These led up southwards over a walled-in space. At the south side of this western group of buildings is a brick structure (P) of which the floors have completely disappeared, leaving the stone thresholds high and dry. It is a kind of "megaron". The door is in the north-east corner. The entrance-hall is bounded by the queer curved wall which runs in from the Bridge (Pl. XXXIV. 4). The outer lobby has two closets opening off each side; the main room is blank and the inner room has another series of closets built out from the middle of the back wall. The foundations of an earlier wall run along the north side.

#### **OBJECTS**

## The North Harem

- 34/42. Part of a limestone plaque showing on one side the lower part of a princess behind her parent's chair, a border of flowers, on the other a kneeling figure, 16 cm. high (Cairo). (Pl. LXXIII. 8, 9); [see further, p. 232 below].
  - 48. Fragments of the arms of half life-size statues in red granite, some bearing the early Aten cartouche (Cairo and Canford).
  - 51. Fragments of red granite colossi, part of leg and a toe.
  - 52. Faience amulet in openwork. ( , 1·3 cm. high.
  - 57. Fragments of green faience moulded plaques, a fillet between rolls, 8.6 cm. wide (Cairo).
  - 58. Foot in faience, 5.3 cm. long (Cairo).
  - 60. Fragments of moulded faience, six rolls or more slightly splayed, 11·1 cm. wide (Cairo and Ashmolean).
  - 61. Fragment of wooden lid for a pen case, inscription to be inlaid , 13 cm. long (Glasgow).
  - 64. Fragment of war helmet in blue faience for inlay, 4·1 cm. high (East Anglia).
  - 66. Bronze stylus, 18.3 cm. long (Boston). (Pl. LXXII. 10.)
  - 67. Torso, parts of arms, lower parts of legs of red granite statue of a princess. Half life-size inscribed with early Aten cartouches (Cairo).
  - 68. Fragment of granite stell showing the King offering a vase to the disk, 21.8 cm. high (San Diego).
  - 69. Fragment of granite stell showing the head of a princess, 11·2 cm. long (Boston). (Pl. LXIII. 4.)
  - 70. Fragment of granite relief showing a foot, 6.2 cm. long (University College).
  - 72. Fragments of the lower part of a granite stell showing on both sides a relief of the royal family worshipping. Largest fragment, 24 cm. high (Cairo). (Pl. LXIX. 1.)
  - 74. Fragment of faience showing a hand in relief, 5 cm. long.
  - 75. Ear of a wooden statue, 5.4 cm. long (Glasgow).
  - 76. Part of a flail in sandstone, 11 cm. long (University College).
  - 192 and 198. Many fragments of column drums showing the lower parts of figures of the royal family (Cairo, British Museum, San Diego, and Boston). Also many fragments of the type shown in Pl. XXXIII. 5, 6.

Two faience rings inscribed with the name of Akhenaten, Types I. A. 2e, I. A. 2i.

## Area of the entrances from the Sikket es-Sultan

- 34/78. Fragment of faience for application to a wall, 8.5 cm. long.
  - 79. Fragment of the wig of a statue of the Queen, 7.6 cm. long.
  - 80. Large bronze crowbar, 67.2 cm. long (Cairo). (Pl. LXXIV. 1.)

- 81. Two fragments of an offering-table in limestone, 8 cm., 7 cm. long.
- 82. Fragment of red granite statuette, 14 cm. high (Glasgow).

## The South Harem

- 35/388. Two alabaster roundels, 2.8, 2.3 cm. in diameter.
  - 390. Fragment of limestone relief showing a servant, 14.5 cm. high (Cairo).
  - 391. Fragment of group of monkeys in limestone, 2.4 cm. high. (Pl. LXIII. 3.)
  - 392. Part of rosette in faience, 5.2 cm. diameter (Cairo). (Pl. LXXII. 5.)
  - 393. Fragment of faience tile, 7-1 cm. long.
  - 394. Ditto, showing water and lotuses, 6.7 cm. long (Cairo).
  - 395-7. Figures of fish in limestone partly embedded in plaster, 39 cm. long (Cairo and Ashmolean). (Pl. LXXIII. 4.)
  - 398. Five balls of plaster.
  - 399. Cast of the upper part of Nefertiti's cartouche in plaster, 8 cm. high (Ashmolean). (Pl. LXXI. 7.)
  - 407. Fragment of limestone relief showing a human face, 6.6 cm. high.
  - 408. Ditto, showing lower part of servant, 7.5 cm. high.
  - 409. Limestone trial piece with rough line scratched on it, 8.8 cm. high.
  - 410. Plaster cast of a footprint, 17 cm. long (Cairo).

South of the Harem Quarter is the Bridge, but this will be better described under the State Apartments with which it really links up (see below, p. 56). It is sufficient here to say that it was built after the South Harem, the Magazines next to be described, and the east wall of the Palace. The approach to it from the west cuts through a brick paving which overlies a thick layer of chips, obviously from the carving and fitting of the stonework in the South Harem. The south wall shows a blocked doorway which originally led into the Magazines; the east wall of these continues below the filling at the bridge head, as does also the main east wall of the Palace. Since both walls are whitewashed it is clear that originally they had been exposed to view.

# 3. The Magazines, &c. (Pls. XIII A. 3 (Q-R); XIV; XXXIV. 5-XXXV. 2).

The entrance to this block of buildings is somewhat obscure. In the north-east corner a short flight of stairs (Q) seems to have led down from the approach to the Bridge into an open space whence access is obtained to the Magazines themselves. Originally the southern two-thirds of these extended rather farther west, as can be seen from the foundations (R) drawn in outline only on the plan (Pl. XIII A. 3). When the present thick west wall of the block was built, an even heavier wall was constructed to branch off it near the south end which ran westwards the whole breadth of the Palace. In the east end of this wall is a big door (S) which led into the narrow court between the Magazines and the east wall of the State Apartments and also into the even narrower court which extends along the south side of the latter.

The Magazines fall into three main blocks:

(a) The Northern Block. This is set only 50 cm. in from the main east wall of the Palace and, as has been said above, its own east wall ran farther north under the present bridge. The south wall of the Bridge has replaced the older north wall of this block except to the west where it utilized it. Traces of the old north wall can, however, be seen to the east. The partition walls of the northern chambers were built straight on with no bonding. At the south end is an open court (T) approached by a corridor, perhaps also open to the sky, from the north. There

had originally been a doorway at the end of this corridor. This was bricked up when the Bridge was built. The walls had been decorated with a panel pattern, which naturally stopped short at the door (Pl. XXXIV. 5). When the latter was bricked up the walls were whitewashed so that the joints of the blocking should be concealed. On either side of this passage are square rooms. These may have opened along the whole of their breadth on to the passage, though a depression in the brick paving implies that there was at least a light screen wall at this point. In each of the rooms were found columns built of specially rounded bricks, with narrow brick partition walls between them. The surrounding rooms are much destroyed, but the general scheme is clear. The rooms in the north-east corner, which originally balanced the four rooms in the north-west corner of the block, have been knocked into one, and a solid wall painted yellow runs over their stone thresholds (Pl. XXXIV. 6). Many of the rooms have brick supports for shelves. The court (T) at the south end was flanked by five magazines on the east and west sides, all in a very ruinous condition. Against the south wall of the court on the main axis is a small room. The door is therefore thrown somewhat to the east of the centre. To the south is a passage which runs from the narrow west court above described right through to the east wall of the Palace. The western half of this is paved with rough plaster. The projection from the north wall in the eastern half may be the foundations of a staircase to the roof. It thus gives access to the narrow passage running between the Magazines and the Palace wall, which from this point southwards abandons the low podium on its inner side and is built right up to its whole width.

(b) The Central Block. This and the southern block are built about a metre in from the Palace wall. There is a door from the cross-passage in the centre of the north wall and access could also be obtained by means of a small door in the north-west corner. There is an open court (U) with traces of mud paving. Earlier rubbish-pits abound and the foundations of the store-rooms are constructed with considerable care so as to run down to virgin soil. Originally, as has been said, this and the next block ran farther west. With the construction of the later west wall the five western store-rooms have been considerably shortened. These in their present form are exactly like the closets in the Harem. The south part of this central block is confusing. There seem to have been several alterations in the plan. The thick later west wall is pierced by a door (V) to which two steps lead up from the west. Screen walls at the side seem to indicate a ramp leading down within, but the floor-level is broken. From here four store-rooms open to the south, in the second of which the back wall is replaced by two steps leading down to the southern block. Along the north side of the passage is the foundation of an earlier wall. This part seems also accessible from the north, where the wall is thinner. On the east side is a similar group of magazines opening off the south side of a corridor entered from the north. Owing to the fact that this part was not curtailed there are five magazines, or rather three and a double one. A door from the north is in a corresponding position and one of the store-rooms again acts as a passage with steps down southwards at its far end. Again there are traces of an earlier wall along the north side. There is also a door into the space between the Magazines and the east wall of the Palace. Whether there was access from these two groups of store-rooms to the central corridor is uncertain. The denudation is considerable. There is a lobby to the north, then the foundations of a wall which must have had a door in the middle. Next come depressions

<sup>&</sup>lt;sup>1</sup> [Pl. XIII. A. 3; omitted from Pl. XIV.]

for two columns whose position has been changed, since similar depressions overlap each to the east. At a slightly higher level the corridor continues with three columns, the bases about 70 cm. in diameter, on either side. The south wall is broken but seems to have been pierced by two doors.

(c) The Southern Block. At the north end of this is a hall (W), the roof of which was originally supported on two rows of eleven columns. The four surviving bases measure 55 cm. in diameter and bore a wooden column with a base diameter of 30 cm. The westernmost pair has, however, been cut off by the later wall and the bases which supported the columns were found outside. To the south of this colonnade open two corridors, each flanked by a pair of small store-rooms. On the main axis is a large hall running north and south, the roof supported on two rows of ten square brick piers based on low sleeper walls. Only a few survive. Between the pair at the south end is a brick dais.

The western side-corridor has seven store-rooms opening off its east side, mostly provided with a single central and two side supports for shelves. To the west a similar number of store-rooms originally opened. With the building of the thick west wall, however, these were demolished, though their stone thresholds and the original wall line are visible (Pl. XXXV. 1). Their foundations appear beyond the west wall and survive in one case to five courses high (Pl. XXXV. 2). In the second from the south is a pit containing the skeletons of nineteen cats and dogs.

The eastern side-corridor gives on to eight store-rooms on each side, some still containing supports for shelves.

To the south of these is a passage, separating them from the north wall of the Coronation Halls (p. 60). This passage was almost certainly blocked at the west end, for although the later thick west wall stops short, the intervening space was filled with hard mud and broken brick, as was the space between the west wall and the old façade of the store-rooms.

This line of brick-built private buildings presents a number of problems. It seems to have been built in its entirety before the State Apartments, which lie to the west. This seems clear from the fact that the west side of the Magazines was demolished and the Bridge which is an integral part of the main scheme cuts through earlier buildings. On the other hand, it is noteworthy that the old west wall of the Magazines follows exactly the line of the east wall of the State Apartments. Furthermore, when was the main east wall of the Palace built? The varying widths of the passages immediately inside that wall suggest that the various blocks were built first and almost independently and that the enceinte wall was eventually constructed to enclose them all. It seems more probable, however, that the wall was built first with the position of the gateways clearly marked. The various groups of buildings were then put in hand probably all at the same time under different overseers. They were altered as necessity and occasion demanded. This, as anyone acquainted with the East knows well, would easily account for slight discrepancies in alinement. If the present writer reads the character of Akhenaten aright, it was natural that he should devote most of his care and energy to the hitherto unknown magnificence of the State Apartments, and while he would no doubt insist on rigid symmetry and thoroughness in individual parts of the Private Quarters, he would not trouble to look at them as a whole.

#### **OBJECTS**

## The Magazines, &c.

- 35/112. Part of fish plaque in blue faience, 6.2 cm. long (Cairo).
  - 127. Limestone block showing lower part of kneeling figure in relief, 25 cm. long.
  - 132. Limestone trial piece showing two signs, 10.2 cm. long.
  - 136. Fragment of green faience with cartouche of Tuthmosis III, 5 cm. long.
  - 137. Sherd of Late Helladic IIIa vase, 8.5 cm. long (British Museum).
  - 138. Ditto, 6.6 cm. long (Cairo).
  - 139. Sherd painted with lower part of two human figures, 8 cm. high.
  - 140. Head of uraeus in blue faience, 4.3 cm. long (Norwich).
  - 141. Sculptor's trial piece in limestone showing human head, 4.4 cm. long.
  - 147. Fragment of red and yellow faience, 4.2 cm. long (Ashmolean).
  - 149. Fragment of second cartouche of later name of the Aten in green faience, 3.5 cm. long (Otago).
  - 150. Sherd of Late Helladic IIIa pilgrim flask, 5·8 cm. long (Museum of Classical Archaeology, Cambridge).
  - 155. Sculptor's trial piece in limestone showing a human head, 6.8 cm. long.
  - 156. Ditto, showing signs, 14 cm. wide.
  - 158. Part of faience plaque showing lotuses in light blue on dark blue, 5 cm. wide (Boston). (Pl. LXXII. 5.)
  - 159. Fragment of faience kohl tube with part of Akhenaten's cartouche, 2.4 cm. long.
  - 160. Three fragments of faience plaques (San Diego and Cairo). (Pl. LXXII. 5.)
  - 161. Fragment of faience vase, 4.3 cm. wide (Norwich).
  - 162. Fragment of faience wig for inlay, 3.5 cm. long.
  - 164. Lid of faience jar with lotus design, 11.3 cm. wide (Cairo).
  - 165. Sculptor's trial piece in limestone showing 

    and 

    6.2 cm. long.
  - 166. Fragment of alabaster vase inscribed with the cartouches of Smenkhkarë, 4 cm. wide.
  - 176. Fragment of blue faience tile with floral decoration, 7.4 cm. high (Cairo).
  - 177. Fragment of dark blue faience tile with light blue design of duck and flowers, 7.5 cm. long (Cairo). (Pl. LXXII. 5.)
  - 178. Fragments of faience plaques showing ducks and butterflies (San Diego and Cairo). (Pl. LXXII. 5.)
  - 179. Fragments of faience plaques (Cairo).
  - 180. Base and part of side of Late Helladic IIIa pilgrim flask (Museum of Classical Archaeology, Cambridge).
  - 182. Rim of faience jar, 6.4 cm. high.
  - 183. Head of uraeus in blue faience, 5.5 cm. long (Manchester).
  - 184. Fragment of white glass vessel decorated in blue and yellow, 3.3 cm. long (Cairo).
  - 190. Four sherds from Late Helladic IIIa pilgrim flask (British Museum and Museum of Classical Archaeology, Cambridge).
  - 191. Group of monkeys in limestone, 6.6 cm. high. (Pl. LXIII. 3.)
  - 192. Limestone roundel, 2.8 cm. diameter. (Pl. LXXI. 1.)

  - 196. Sherd of Late Helladic IIIa vase, 5.5 cm. long (British Museum).
  - 210. Sherd of Cypriote ware, 6.5 cm. high.
  - 213. Fragment of faience block in blue and white, 3.6 cm. long (Cairo).
  - 219. Sculptor's trial piece in limestone showing rude head of the King, 14.7 cm. high.
  - 220. Limestone roundel, 2.8 cm. diameter. (Pl. LXXI. 1.)
  - 221. Sherd of Late Helladic IIIa pilgrim flask, 4 cm. long (Museum of Classical Archaeology, Cambridge).
  - 222. Sherd of Late Helladic IIIa rough ware. (Ditto). (Pl. CIX. 4.)

- 233. Fragment of alabaster dish with blue-filled incisions, 5.9 cm, high (Cairo). (Pl. LXXI. 1.)
- 234. Fragment of faience bowl inscribed with name of Meritaten, 3.7 cm. long (Cairo).
- 239. Four sherds of Late Helladic IIIa vases (British Museum and Museum of Classical Archaeology, Cambridge).
- 241. Fragments of white faience vessels (Cairo).
- 242. Part of blue faience bowl, 7.3 cm. wide (Cairo).
- 243. Head of frog in blue faience, 2·1 cm. long (Cairo).
- 244. Four fragments of faience (Glasgow and Cairo).
- 245. Fragments of faience inscribed with Tyi's name (Cairo).
- 247. Head and shoulders of clay statuette of woman, 2.5 cm. high. (Pl. CIX. 3.)
- 248. Fragments of faience bowl in form of a fish, 12 cm. long (Cairo).
- 249. Oblong faience inlay, 11 cm. long.
- 250. Fragment of wig in blue faience for inlay, 3 cm. long (Norwich).
- 259. Fragment of faience bowl, 4.5 cm. long (Boston).
- 272. Part of blue faience footstool showing inscription and captive's head, 10 cm. high (Cairo).
- 273. Four sherds of Late Helladic IIIa pottery, one of Cypriote (British Museum and Museum of Classical Archaeology, Cambridge).
- 274. Fragment of alabaster bowl with blue inlay of eternity signs, 7.9 cm. long (Cairo). (Pl. LXXI. 1.)
- 275. Part of white faience bottle, 8.2 cm. high (Cairo).
- 276. Two fragments of faience (Cairo).
- 277. Two fragments of sandstone inlay (Cairo).

Also faience ring bearing the name of Akhenaten, Type I. A. 2b.

Ditto, bearing the name of Smenkhkarēc, Type I. A. 3a.

Faience pendant bearing the second cartouche of the Aten, Type IV. E. 10.

Petrie (op. cit., p. 7) mentions Aegean pottery, a faience vase with the names of Akhenaten and Nefertiti on a fragment of glass inscribed with the early Aten cartouches.

# B. THE STATE APARTMENTS (Pls. XIII B; XIV; XV. 2 and XXXV. 3-XLIV. 2)

The construction of these was of stone, like the Great Temple. They have been subjected to an equal measure of destruction and, considering the depth at which the foundations lay, this destruction was even more painstaking. Again, practically no stonework remains in situ, except in one case, the Weben-Aten, where it gives us no clue. This part of the Palace will be discussed on the same lines as the Great Temple. That is to say the existing remains will first be described and our reconstruction of the original scheme will come later. With regard to the latter it must be said that, since in every case where it is possible to check, the remains are symmetrical, we have assumed that they were symmetrical—save in minor details—throughout.

# 1. The Existing Remains (Pl. XIII B)

The entrance system from the north is now completely lost under the cultivation, and for nearly 200 metres the plan is entirely lost to us. All that we can say is that the wall-trench which bounds the State Apartments to the east almost certainly ran as far as the north wall of the Palace, thus giving us for the dimensions of the whole an oblong area over 450 metres long and over 200 metres broad.

(a) The Weben-Aten (Pls. XIII B; XXXV. 3-6). At a point some 200 metres south of the north end of the Palace, a wall-trench runs off westwards from the east wall of the State Apartments. No traces even of the foundation plaster remain. There is a slight oblong projection to the south about half-way along which may indicate a narrow gateway. At the west end is a

shuttering of brick. The only piece of stone found here was a sandstone column base 75 cm. in diameter with the marks of a column 55 cm. in diameter at the bottom. The wall-trench then broadens out into an area where the foundation trenches (X) cut in the virgin soil seem to show no rhyme or reason (Pl. XXXV. 4). A few of the lowest courses of walls remain, and by one of them was found a second column base of the size and material already mentioned. In the centre of the area is a confusing mass of foundations which include huge rough drums and half drums of stone usually about 1.50 metres in diameter and 60 cm. high. They are often deeply incised with masons' marks (Pl. XXXV. 5, 6). Though apparently laid at random the smaller slabs which surround them are carefully fitted. Mr. W. B. Emery suggested that the shape of these drums may have made the task of transporting them easier, since they could be rolled down from the quarries. To the north of these is a platform of artificial filling about 2.50 metres high which, as we shall see, consisted of the sand and rubble scaffolding with which the upper part of the walls was constructed cut down to the level required for the floor. Above it is a thick layer of chips and plaster marking the level immediately below the floor. (For a more detailed description of this method of construction see below, pp. 57 f.) Along the extreme north end run the foundations of a wall, with brick shuttering along its north side (Pl. XXXV. 3). To the west of this the area narrows down at the north side but widens a little to the south. At both sides is brick shuttering. Heavy foundations are still found, and continue westwards under the cultivation, no doubt soon to widen out as soon as the main axis of the Palace is passed and to repeat the bewildering substructures of the eastern part. The theory that the building was dismantled soon after its construction (JEA. XXI. 133) is untenable. That it was built before the ninth year of Akhenaten's reign is clear from the occurrence of the early form of the Aten name, and it was standing long enough for one of the princesses (presumably Meritaten) to have the royal uraeus added to her portrait (p. 61 below, No. 34/56; Pl. LXVI. 4) on her accession.

From the south-east corner of the Weben-Aten two wall-trenches run southwards for some 50 metres twice stepping up 25 cm. before a cross wall joins them. The centre line of this projection is about 38 metres east of the north-south axis of the Palace, and almost certainly a similar projection occurred the same distance west. At intervals both at the sides of the wall-trenches and in the narrow space between them a mud paving was noted which slopes up gradually from the north end, projects southwards beyond the end of the walls, and eventually reaches the Broad Hall to the south. It follows the natural slope of the virgin soil, being consistently about 50 cm. above it and, since it seems to cover the whole of the great open space south of the Weben-Aten, presumably marks the original level of the ground before it was raised and levelled to its present height when the main buildings were constructed. Thus at the north end it is about 2 metres below the presumed floor-level, but when it reaches the Broad Hall it is practically at the modern surface.

Some way south of the end of the projection and slightly to the west of the line are a few broken walls of Roman date. (For the possible reconstruction of this area see below, p. 75.)

(b) The Broad Hall (Pls. XV. 2, XXXVI-XXXVII. 6, and XXXVIII. 1). At the point where the east-west wall runs to join the Weben-Aten the main eastern wall of the State Apartments emerges from the cultivation. No stone remains in situ, and except in a very few areas even the foundation plaster has been ripped up. The site of the wall, however, was clear in the cross-section (Pl. XXXVI. 2) which shows the filling of clean sand to the left and the dark disturbed earth which marks the position of the wall. When it was ripped up no doubt the

fragments of statues and other objects were flung down into the resulting trench to be covered gradually with debris. At all events practically all the antiquities found were lying along the line of the wall.

A width of 8 metres along the western side of the wall is flooded with plaster which steps up and down at intervals in conformity with the natural line of the virgin soil (Pl. XXXVI. 1). Wherever this plaster survives it is marked, along the west side, into rectangles 2.50 metres by 1.25 metres, by scratched lines. The distance between these is just over 2 metres and the east and west lines are continuous. Several of these rectangles show marks of stone upon them and, when we consider the thousands of fragments of granite colossi found in this area, they can only mark the position of the bases of the statues.

Opposite the entrance between the North and South Harems (L) a change occurs in the system (Pl. XXXVI. 3). The wall-trench, which in this part still retains all its plaster, bearing marks of stone blocks, widens out by 50 cm. on each side. On the main axis, for a distance of about 9 metres, the marks of stone run across the plaster which is here about 2 metres narrower (L). The two statue bases on each side are set back about 50 cm. Near each corner of this projection across the plaster are pits 30 cm. deep and about 75 cm. in diameter which run down through the plaster into the virgin soil. They may have contained foundation deposits. Nearby was found a small limestone column base 40 cm. in diameter supporting a wooden column 20 cm. at the bottom. Before the corner is reached a trough built of old stones has been constructed on the plaster.

At the corner where the floor plaster turns west a number of plans and sketches are scratched on it, evidently by the workmen at the time of building (Pl. XXXVI. 4–6). The floor plaster of this southern border of the great "parade ground", if we may call it so, is over 9 metres wide. For the first 45 metres or so there are marked out two rows of squares which we have come to associate with the foundations of columns. Between the squares in the north row are rectangles of the same shape and size as those which seem to have been the foundations of statue bases in the eastern arm. It may be said at once that, except in the very middle of this whole area—i.e. on the main north—south axis of the Palace (see below)—these squares show no signs of having been built upon. Only the intervening rectangles in the front row display marks of stone blocks, and we are therefore driven to the conclusion that although this area was originally laid out as a gigantic colonnade well over 150 metres in length, the scheme was never carried out, and the "parade ground" was bordered by statues alone except on the main axis where stood a pavilion to be described below.

In the middle of this eastern section two wall-trenches cut across the hall with a kind of causeway in virgin soil between them. These trenches are joined by a cross-trench some 11 metres north of the floor plaster and continue a similar distance south.

Its counterpart in the western section is identical save that the heavy plaster foundations of a stone-paved floor are to be seen above the filling between the wall-trenches (Pl. XXXVIII. 1). This runs from more or less the level of the "parade ground" to 1.25 metres higher at the point where it breaks off on a level with the northern edge of the floor-plaster. Blocks to a

<sup>&</sup>lt;sup>1</sup> These steps are always 25 cm. high or thereabouts. This is in order to conform with the regular size of the stone block which has a section 25 cm. square. When a rise was needed the lowest course was discontinued and what had hitherto been the second course became the lowest.

height of three courses mark the western retaining wall over the floor plaster of the Broad Hall. The plaster becomes very rotten as it approaches the cultivation and is often completely absent (Pl. XXXVII. 1). There was therefore no hope of confirming, below the modern cultivation to the west, the turn northwards which would correspond to the eastern arm of the Broad Hall.

Between these narrower wings is, in the centre, a broad extension, 77 metres in length by 17·50 metres in breadth. The foundations for the columns are now marked out in four rows, the squares being enlarged to 3·50 metres each way instead of 2·50 metres. Statue bases exist between the foundations of the outer row. These face outwards invariably, i.e. east at the east end of the projection, north along the north side, west at the western end. Again there is no evidence for the columns ever having been erected, indeed there is every evidence to the contrary. West of the centre was found a large area of the floor plaster covered by 85 cm. depth of clean sand in which no objects were found. Above this sand was a good floor of mud on a level with the mud floor of the "parade ground" which is visible throughout in the section north of the floor plaster (Pl. XXXVII. 2). On this mud floor was painted a symmetrical panel pattern

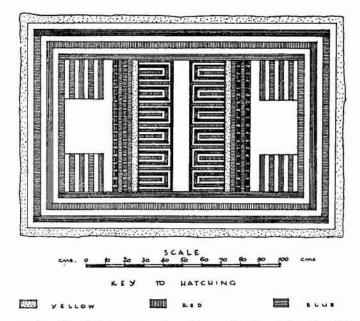


Fig. 13. Small painted pavement on the south side of the Broad Hall.

(Pl. XXXVII. 3, Fig. 13) of a typical "Amarna" type. The marking-out for column foundations on the plaster runs unbroken below this unbroken floor and farther west many other traces both of the mud floor and of paint came to light. In some parts the mud floor had been burrowed through over the marking-out for a column. Evidently the demolition of this part of the Palace occurred during the lifetime of those who had built it, who, remembering that foundations had been planned below, had hopes of extracting the stone. The absence of any trace of blocks on the plaster, however, proves their disappointment. As further proof that this mud floor above the plaster is contemporary we found that the capital of one of the columns of the central pavilion described below had been thrown down, had crashed through the mud, and had partly embedded itself in the sand-filling beneath (Pl. XXXVII. 5).

<sup>&</sup>lt;sup>1</sup> The deduction that there must have been some such mud paving at a higher level than the plaster was made by Mr. Lavers the very day before the mud paving itself was found. It was adopted as a probable theory which would account

The central 19 metres of this area (Y) showed a different system superimposed on the original layout (Pl. XXXVII. 4), for the squares for the columns of the original scheme are still marked out on the plaster below. Here are the marks of the stones which formed the foundations of four rows of four columns, or perhaps three columns with antae at the southern end. Flanking this are layers of plaster showing the marks of a wall two blocks thick, i.e. 1 metre above a layer of sand-filling 70 cm. high. Flanking these again are layers of plaster on a filling only 50 cm. high, half a block wide on the outside, one block wide within. In the three "aisles" between the columns are similar layers of plaster one and a half blocks wide, that in the central aisle is only 45 cm. above the original floor plaster. Across the north side of this area run the marks of a wall on the low-level plaster, and from the edge of this plaster is a projection northwards of about  $2\frac{1}{2}$  metres which is nearly 6 metres wide. It is just to the east of the main axis and is bordered by the marks of a wall one block thick. Throughout this area alone were found considerable fragments of columns. In the inner rows they seem to be invariably of fine crystalline limestone, lightly incised (Pl. XXXVII. 6). In the outer rows they were of painted sandstone. These will be discussed when we come to reconstruct this part.

It need hardly be said that the floor plaster steps up and down here as elsewhere in conformity with the configuration of the virgin soil.

South of the Broad Hall runs a thick wall which has been mostly destroyed. The definite traces of it can be seen on the plan. (For the reconstruction of this area see below, pp. 76, 77.)

(c) The Courts south of the Broad Hall (Pls. XXXVII. 7-XXXVIII). These courts which extend right across the width of the Broad Hall run back for more than 45 metres. Before the structures pertinent to the discussion of their final state are described, a word must be said about an earlier building of brick (Z) which occupied part of the area devoted to the later East Court. That it is earlier is certain from the fact that it is cut through by the stone walls of the final scheme, from the fact that it was entirely filled with clean sand in which nothing was found, and from the fact that it is always carefully razed to a level slightly below that of the court whose surface was hardened in some way we cannot determine. Its floor seems to have been the virgin sand, a few bricks which look as if they formed a pavement being probably the result of chance. We are, we believe, justified in regarding it as the office of the architect engaged on the erection of the State Apartments in which he would lay out his plans, interview his foremen, pacify His Majesty, and receive his bakshish from the contractors. There is a large studio which would have an admirable north light, and in the south-east corner a small set of rooms to which he could retire for his siesta. The extension westwards may have formed a small separate unit for the "Clerk of the Works". It contains the ordinary elements of such a building.

On the main axis south of the Broad Hall are several lines of plaster which still retain the block marks. These show the setting-out of a colonnade two columns deep with antae on each side stretching nearly 30 metres on each side of the axis (Pl. XXXVIII. 2). There were fourteen columns in each row, the intercolumniation on the central aisle being 3.50 metres as opposed to just over 1 metre elsewhere. At either end are the foundations of the retaining walls of

for the various difficulties involved in believing that the uncovered and rough plaster could ever have been a true floor, that such stonework as survived was really too rough to have been left to be seen, and that every doorway (in the Sanctuary Halls of the Great Temple) had a raised threshold. It is seldom that a suggestion is so quickly and incontrovertibly proved.

<sup>&</sup>lt;sup>1</sup> The circle shown on the plan (Pl. XIII B) between the middle columns of the row west of the axis marks the site of the unexcavated soil which still supports a telegraph post.

approaches to the colonnade from east and west. The columns were not unlike those in the garden court of the Harem, with the same "swags" of ducks, but the capitals of both columns and antae are carved with free foliage. South of the colonnade on the main axis are the remains of a ramp (AA) leading down to the Central Court. The marks of the foundations of the heavy retaining walls are visible as well as the plaster on which were laid the paving stones. This latter is too destroyed to give us any good idea of the slope. Whether during the original building operations or later we do not know, this approach was lengthened by some 7 metres, the stones of the original cross wall being removed. Heavy blocks of alabaster with figures of captives in relief evidently came from the paving (Pl. XXXVIII. 3). The rectangular cutting in the virgin soil which crosses the south end of the west wall-trench baffles us.

The east and west wall-trenches of the colonnade continue southwards as far as the south wall of the State Apartments, thus dividing this section into three parts. The Central Court was entered from the north as has been described and, on the main axis, another ramp led up southwards to the next section of the Palace. The court is paved with brick resting on a filling of sand and builders' waste which raises it 1.60 metres above the level of the foundation plaster (Pl. XXXVIII. 4). On each side of the approach from the north twelve squares of plaster bearing marks of blocks were let into the brickwork. From the fragments of carved stone near by it would seem that they supported stelae (Pl. XXXVII. 7). Below each of these is a pit varying in depth from 1.20 to 1.80 metres, lined at the top with stone and below with brick (Pl. XXXVII. 8). These must have been the site of foundation deposits, though the only object discovered in any of them—even in those still completely sealed over by the plaster—was a rather rude sketch of the King on a potsherd. Whether the ceremony of laying the deposits was deputed to some official who considered the objects too valuable to be hidden for ever we shall unfortunately never know.

In each of the south corners of the Central Court are the foundations of ramps leading up and through the east and west walls to the courts on either side. Across the centre of the court runs the main east—west axis of the Palace. The ramps which descended here to the Central Court are flanked on the north side only by further foundations in which lay fragments of inlaid columns and of uraeus cornices in sandstone.

The Eastern and Western Courts contained no foundations of stelae. That to the west continues under the cultivation, and only the end of the foundations for the ramp which entered it from the river side could be recovered. The approach from the Broad Hall to the north was flanked on either side by the foundations for a colonnade of which the inlaid fragments both from columns and cornices were found (Pl. LXIX. 6). The exit southwards as well as that leading eastwards into the colonnade and the two which enter the Central Court have no traces of columns. The southern of the latter two seems to have been discarded, for a brick paving ran over part of the foundation trenches.

The Eastern Court, mutatis mutandis, is identical. Here, however, the whole of the exit westwards was recovered and proved to be flanked by colonnades similar to those which flank the entrance from the north. This exit crosses the east wall of the State Apartments which is here broadened to 3.50 metres. It then descends to cut through the brick paving which originally ran between the South Harem and the Magazines (see above, p. 46). Both the marks of the retaining walls and of the paving of the ramp itself are very well preserved. The ramp descended to floor-level just opposite the entrance to the garden of the South Harem. It was also

apparently accessible from the south by means of a flight of brick stairs in the court west of the northern block of Magazines (see above, p. 46). This area was bounded to the south by a wall-trench running right across from the east wall of the State Apartments. (For the reconstruction of this area see below, p. 77.)

(d) The Bridge (Pl. XXXIX. 1). This structure continues the east—west axis of the Palace (Pl. XXXVIII. 5). Its retaining walls of brick are extremely heavy and have been built across the east wall of the Palace which was here cut down to make room for it (see above, p. 46).

The old mud-brick paving between the South Harem and the Magazines is left intact between the east end of the stone-paved ramp which cut through it and the Palace wall. Where and how access was obtained to the bridge-head is uncertain. That part of the bridge-head which projects beyond the Palace wall was filled with sand and the flooring above has gone. The Bridge was carried over the Sikket es-Sultân on two massive piers of brick before it reached the abutment which projects from the west wall of the King's garden.

The building is extremely solid. It is further strengthened by the introduction of great balks of cedar, one of them measuring 5 metres with a square section of 60 cm. The western passage and the broad central passage were paved in brick, the eastern passage apparently in stone. The side passages are about  $3\frac{1}{2}$  metres wide, the central passage just over 5. It has been suggested that these spaces were arched over (Petrie, op. cit. 8). But they are not too great to be spanned by wooden beams. Such ambitious arches were as yet unknown in Egypt and, unless they were very flat (an unlikely thing in view of the fact that the Egyptians were not skilled at such work), they must have risen considerably higher than the top of the ramp which leads up to the eastern bridge-head. It seems best, therefore, to believe that the passages had a flat roof. There were certainly rooms above the Bridge or, at any rate, a covered corridor, since many fragments of frescoes were found. These lay mainly in the eastern passage, the western passage containing only very small pieces in a condition which precluded the possibility of the design being determined. In the eastern passage were found two human faces, probably portraits of the King, about a quarter life-size. One of these has a large ear-ring consisting of a circular plaque with a Maltese cross in the middle. Part of an openwork stand with a necklace on it, a hand holding an cankh from the end of an Aten ray, fragments of cartouches bearing the early form of the Aten name, the name of Nefertiti and that of 'Ankhesenpaaten were also found. Several very beautiful flower designs occurred, on black or yellow backgrounds. These included poppies, cornflowers, daisies, and a flower not unlike an azalea. There is a leaf like an olivecoloured oak-leaf on a black ground and a small plant on a similar ground whose yellow flower projects upwards and is painted against a background of water. A large lotus bud is also shown. (All the plant designs were retained in Cairo. The rest are at the Ashmolean.) For our interpretation of the Bridge, see below, p. 78, and for the approach to it from the King's garden to the east, p. 86.

(e) The Southern Section (Pls. XXXIX. 2-XLIII. 3). Before the final state of this section is described we must again indicate briefly the earlier structures which occur. All over this area

¹ The bricks of the side walls vary slightly to the east of where the passage narrows down. The lower courses are in a good state and step up eastwards, the upper courses are not so good. I took this to mean that there was a flight of steps here which had protected the lower courses from weathering. Mr. Lavers, however, points out that the bricks are of different types and that the explanation is that a new consignment of brick came into use when the walls were only half completed. This stepped construction is quite usual. It can be clearly seen in the false door shown in JEA. XVII, Pl. LXXVIII. 1 and 2.

and over much of that occupied by the Courts south of the Broad Hall there is an irregular layer of chips of stone, plaster, and mortar immediately overlying virgin soil. The third foundation trench east of the main north-south axis has cut through two circular constructions built of mud brick, the walls half a brick thick. The interior is filled with mortar which has splashed over the top of the bricks, proving that they were not more than two courses high. These are built sloping down to the south, presumably to collect the mortar more easily (Pl. XL. 1). Towards the south end of the South-East Courts are two circular pits lined with plaster to which a flight of shallow steps led down from the north. These were later completely concealed by the mud paving which in this part runs about 70 cm. above virgin soil (Pl. XL. 6). It seems clear, then, that the mixing of mortar and plaster<sup>1</sup> and probably some of the rough blocking-out of the stone for the Broad Hall took place here before the various structures to be described below were erected. The building of the Palace therefore was begun at the north end.

(i) The Central Halls (Pls. XIII B, XL. 1–5, and XLI. 1–3). On the main axis (BB) a ramp clearly descended to the central aisle of a breadth of nearly 5 metres, which was flanked by twelve columns on either side. The next rows of columns were 3.50 metres to east and west (Pls. XXXVIII. 2 and XL. 5). The foundations of the walls to east and west of these were 3.50 metres wide to allow, no doubt, for the projecting antae. The filling between these trenches and their neighbours outside (i.e. to east and west respectively) was broken through at two points by a solid block of masonry (preserved only on the west side) (Pl. XLI. 1). Since by these gaps heavy blocks which clearly formed part of broken lintels were found (Pls. XLI. 3 and LXVIII. 3, 4) it is clear that they mark the site of doors into the double colonnades of twenty-four smaller columns which flank this Central Section on each side. The east and west wall-trenches of the Central Halls show no special peculiarities and give no indication as to the presence or absence of doors. It is possible that this part was an isolated unit. At the south end of the main axis and between the wall and the outer row of great columns on each side there seem to be the foundations of ramps leading up southwards through the wall which bounds the whole of the south side of this section of the State Apartments.

In this part and in the rooms to the east described below the method of construction was very well shown. First of all, whether for walls or colonnades, trenches of suitable width were dug in the virgin soil to a depth which naturally varied with the unevenness of the surface but which was never less than 20 cm. These trenches were then flooded with plaster and the exact line of the wall or position of the columns was marked with a taught string dipped in blacking. The foundation blocks were then laid. Between the square foundations for the columns were short connecting walls one block wide which may only have run up a few courses. When the walls began to get too high for the masons to lay the stones a scaffolding was rammed in hard between the lines of walls or column foundations on which the masons could stand for the next series of courses. This scaffolding consisted usually of clean hard virgin sand brought from such pits as that by the Police Quarters to the east (see p. 133). Sometimes, however, probably only if a new cartload of sand had not arrived, chips of stone, broken bricks, and builders' waste generally were used. Each time the scaffolding was raised the mason would puddle a little fresh

<sup>1</sup> This was carried to the workmen in vases of the type XV. 6 of which several were found still filled with it.

<sup>&</sup>lt;sup>2</sup> In one case the filling ran clean over them at a height of about a metre. That this filling was undisturbed was clear from the presence in it of a thin layer of mortar.

mortar. This is shown very clearly in Pl. XL. 2 where the first layers of mortar are 1 metre above the foundation plaster and the second 80 cm. above that. A little farther along a shorter mason evidently worked, for his successive layers are only 80 cm. and 1.45 metres, respectively, above the foundations. The carriage of the building blocks was facilitated by leaving a sloping surface for the men to walk up. Such is illustrated by the layer of chips in Pl. XL. 3. It must sometimes have happened that one gang of masons worked more slowly than another and that one wall or colonnade had reached a height when scaffolding was urgently needed while its next-door neighbour was not yet ready. In such cases a temporary shuttering of brick was erected to enclose the scaffolding on that side (cf. above, p. 51, Weben-Aten, and Pls. XXXV. 3 and XLII. 3). When the top of the walls or columns was reached the scaffolding would in the ordinary way be removed, but in the Palace there was the necessity of having the buildings in question on a high level. As a result the lowest 2 metres or so of the scaffolding was left in situ to act as filling for the floors. The thick layer of stone chips which always occurs just below floor-level (Pl. XLII. 3) is due to the more careful cutting and facing of the wall blocks when they would be seen, i.e. above the floor. When the wall had been properly dressed a layer of plaster was laid on top of the filling to act as a foundation for the paving slabs. When all the stone was removed from the Palace this plaster was frequently left in situ and still retained not only the marks of the paving blocks but also the straight edge where it had run up against the wall or the base of a column (Pl. XLII. 3). How well laid and rammed in was the scaffolding or filling, whichever one prefers to call it, was frequently shown (e.g. Pl. XL. 4) in cases where it still marked the spaces between the square foundations of the columns. On some occasions where even the foundation plaster had disappeared it was our only clue to the position of walls or columns (e.g. the same plate). Fortunately, its composition enabled it to be fairly readily distinguished from the debris which filled the foundation trenches to the surface.

(ii) The Rooms flanking the Central Halls (Pls. XIII B, XLI. 4-XLII. 3). These rooms are best preserved in the east wing. Not only has the modern cultivation encroached on much of the west side but the resulting damp has effectively rotted such plaster as was not torn up at the time of the destruction of the Palace. All that is left are a few stone blocks in situ and the outline of such filling from below the floor as was not cut into when the stone was taken.

The surrounding wall-trenches give no indication of any doors. (a) At the south end are two rooms (CC) which each contained four columns, the trenches in which their foundations were laid running east and west. The plaster-setting for the stone paving is admirably preserved, above 1.95 to 2.00 metres of filling with a sharp line where it ran up against the wall. (b) North of these rooms is a large square block of building. Round the outside runs a floor. Then comes a ring of columns surrounding the central space. Within is a heavy concrete platform in the shape of a hollow square some 40 cm. in height (Pls. XLI. 4 and XLII. 1). The surface shows marks of paving blocks. Within this is a layer of foundation plaster at the lowest level. It is much destroyed, but marks of blocks are visible at some points along the outer edge up against the concrete platform and also round a small square in the middle which has been left completely blank. (c) North of this are two further rooms. That to the east has well-preserved foundations for two columns in a trench running north and south, the filling being held back from round the emplacements by brick shuttering. The plaster-bed for the paving is also admirably preserved (Pl. XLII. 3). That to the west, however, is completely baffling. The whole area seems to be covered with foundation plaster at a low level and there

seem to be indications of four more column bases which do not, however, line up with anything else. Unfortunately, the corresponding area west of the main axis affords us little help. The plaster has gone entirely. The remains of the filling indicate that there were at least six columns, but that is all (Pl. XLII. 2). The foundation trenches here run east and west. The area corresponding to (a) and (b) above is under the cultivation. (For our reconstruction of these rooms see below, p. 79.)

(iii) The South-East Court (Pls. XIII B, XLI. 1, XLII. 4, and XLIII. 1–3). The corresponding area west of the axis is entirely below the cultivation, though luckily enough of that about to be described remains to make our restoration certain. The only clear entrance is from the Eastern Court to the north. There seems to have been some difficulty about levels at the point where it enters the present section, for brick steps (of two periods, one immediately overlying the other, i.e. the treads were 9 cm. higher) run up towards it from the south (Pl. XLIII. 3).

The east side has the foundations of two chapels or pavilions (DD) facing each other and built right up against the north and south walls. The foundations of the southern one have been flooded and there are traces of the preliminary marking-out in blacking (Pl. XLII. 4). Directly on the plaster were two queer little brick structures only five courses high and half a brick thick, each forming three sides of a square with a 1.25 metre side. There were also found, lying loose, two sandstone bases, 46 cm. in diameter, for wooden columns 25 cm. across at the bottom. The northern building had already been set up, for there were marks of blocks in the plaster along the support walls of the entrance ramp and in the main part itself for four columns and their antae (Pl. XLIII. 1). The foundations of the three walls which connect the main body of the chapel with the big wall-trench to the north probably only indicate the usual linking-up of foundations by sleeper walls such as we have seen connecting the columns elsewhere. They would not appear above the floor. The projecting wings on each side are reminiscent of the wings in the Sanctuary of the Great Temple (see above, p. 7). In this area were found many fragments of the vine columns mentioned by Petrie (op. cit. 8 and Pl. VIII) which must be connected with the more finished of the two buildings. Two unfinished capitals were also found (Pl. XLIII. 2).

Immediately to the west of the northern building was a platform of broken brick, 22 cm. high, rammed hard together and surrounded on the other three sides by a sunken pathway bordered with whitewashed bricks. To the south of this is a similar platform, and south again is a trench running round in a square and filled with the same broken brick. Beside it was a much broken piece of walling. The plaster-lined pits already mentioned (above, p. 57) are to the south. (For our reconstruction of this area see below, p. 79.)

South of the southern wall of the whole of the Southern Section is a large open space bounded to the south by a thick brick wall already mentioned above (p. 57). It is entered from the south-east corner (Pl. XIV, S). Towards the west end of the court a number of heavy walls cross it from south to north and are cut through by the south wall of the South Section. Though somewhat denuded, there was a lot of clean sand-filling here, no doubt to bring it up to the level of the floors of the South Section. How it was crossed at this higher level from the exits southwards from the Central Halls we do not know. Outside the south-west corner is a much broken structure which may have been a guard-room.

- (f) The South Court (Pls. XIV; XLIII. 4). This court extends from the section already described as far as the original brick wall which bounded the Palace at this end and from the Magazines to the east to a thick wall to the west. Originally, no doubt, it had been occupied by the huts of the workmen engaged on building the Palace, several walls being found below the later surface as well as two isolated column bases of limestone (one 60 cm. diameter with sunk centre of 25 cm., the other 26 cm. in diameter with cross lines at right angles; Pl. XLIII. 4). The existence of impressions of cartouches in plaster from good models which were common here (see Pl. LXXI. 7) shows that the supply of trained or literate workmen was not adequate and specimens had to be provided.
- (g) The Coronation Hall (Pls. XIII C; XLIV. 1, 2). This is a later addition to the Palace. Its east wall is set back 3.50 metres from the east wall of the rest and some of the bricks, unfortunately none in situ, were stamped with the name of Smenkhkarē and presumably with that of the building which has in no case survived. Below the floor are quantities of earlier rubbish-pits and pits for trees. A good deal of levelling had evidently been necessary, for many of the walls are built on debris. This levelling had been very badly done, and clearly the whole affair was a "rush-job" for a special occasion.
- (i) The Entrance. This was cut through the old south wall of the Palace. Whether by chance more of this than was destroyed has weathered away, or whether the entrance court was always open right across the north end, we do not know. The mud floor has usually disappeared leaving a few ragged walls of earlier date visible. Square piers surround the court on the east, south, and west sides. There are three foundation courses below the floor-level. Above, the piers are whitewashed and have a roll moulding running up the corners. On each side of this court are two long rooms, the roofs supported on four rows of ten<sup>2</sup> square piers. Piers and walls of these rooms were whitewashed. Down the central aisle of the two to the east is a sunken path bordered by a brick kerb with a curved top painted yellow. The top flooring has entirely disappeared.
- (ii) The Main Hall. This was entered by a great door (EE) in the middle of the north side (Pl. XLIV. 1). There are traces of the original stone threshold below a later blocking of brick. It had been assumed (JEA. XXI. 131) that this door had been cut through an already existing wall. Further examination, however, failed to substantiate this, and the heavy foundations which run below the site of the threshold must have been placed there merely to fill a depression in the ground and prevent the threshold from sinking. This blocking must be attributed to the period of the desertion of the site. Petrie (op. cit. 7), without our mass of evidence from other parts of the city, naturally thought that it implied the contemporary disuse of the Hall.

Another entrance exists half-way along the west side. It was approached by a ramp flanked by brick walls.

The Main Hall contains thirty-two<sup>3</sup> rows of seventeen square piers (Pl. XLIV. 2). These are plastered white and a roll moulding runs up the corners. The ceiling was evidently painted to represent a roof of vines, for fragments of plaster painted with grapes and leaves on a yellow background were found. They might also possibly have fallen from the beams which supported the ceiling. They were too battered for any certainty to be attained. The central aisle is rather

<sup>&</sup>lt;sup>1</sup> [See, however, p. 194 below.]

<sup>&</sup>lt;sup>2</sup> [In the restored plan (Pl. XIV), by an unfortunate error, only nine piers in each row are marked.]

<sup>3 [</sup>Correctly indicated in Pl. XIII C; in the restored plan (Pl. XIV) only thirty rows are given by error.]

wider than the rest and possibly the piers here ran up to a greater height than the rest, thus giving clerestory lighting.

In the north-west corner is a shrine (Pl. XIII C) formed by building screen walls between the last two piers. The back at least of this was gaily painted.

- (iii) The South Rooms. A door in the middle of the south wall of the Main Hall gives on to a room (FF) which shows no signs of having contained piers. A marked depression existed in the centre (Pl. XLIV. 2). Since the size is rather too great, at any rate according to Amarna standards, to permit of a roof unsupported in the middle, it would seem that this chamber was hypaethral. To east and west are other long halls. Both, especially that to the east, have been dug or denuded to some depth. Careful investigation, however, showed clearly the foundations of four rows of fourteen piers.<sup>1</sup>
- (iv) The Rubbish-Pits. It has already been stated that below the whole of this room were rubbish-pits and pits for trees which had existed on the spot before the Hall was built. These were clearly seen owing to the fact that the floor has entirely disappeared. Outside the south wall are many more rubbish-pits.

From the south end of the west wall of this area two walls run to join those of the building O. 42. 2 (q.v., p. 81). (For our reconstruction of this area see below, p. 80.)

#### **OBJECTS**

#### The Weben-Aten

- 34/40. Leg of female statuette in red granite, 9 cm. high.
  - 43. Fragment of leg of statue in red granite from the side of a colossus, 17 cm. high.
  - 44. Two fragments from the skirt of a brown sandstone statue half life-size. One bears part of the King's titles.
  - 53. Sandstone block showing painted relief of Asiatic soldier, 28 cm. long (Cairo). (Pl. LXVI. 7.)
  - 54. Torso of female statuette in red granite inscribed with Meritaten's name on the back, 13 cm. high.
  - 55. Calf of female leg in red granite, three-quarters life-size.
  - 56. Block of sandstone showing painted relief of a princess's head (? Meritaten) with uraeus added later, 26 cm. long (British Museum). (Pl. LXVI. 4.)
  - 59. Sculptor's trial piece in limestone showing a human head partly carved, partly drawn in red and black, 22·5 cm. high (Cairo). (Pl. LXV. 9.)
  - 62. Block of limestone showing lower part of kneeling figure in painted relief, 26.2 cm. long (Boston).
  - 63. Sculptor's trial piece in limestone showing two facing heads and a hand above, 18 cm. long (Brussels). (Pl. LXV. 8.)
  - 65. Bronze stylus (?), 10.5 cm. long (Boston). (Pl. LXXII. 10.)
  - 73. Head of a black granite statuette of the King, 12 cm. high (Cairo). (Pl. LXV. 1-3.)
  - 83. Heel of red sandstone statue, 11 cm. high (University College).
  - 90. Belt, part of stomach and kilt of half life-size statue of the King in red sandstone, inscribed with the Royal names and the early Aten cartouches, 11 cm. high (University College).
  - 91. Ear, parts of wig and cheek of sandstone statuette, 6.2 cm. high.
  - 97. Part of the foot of a colossal red granite statue, 35 cm. long, 20 cm. high. (Pl. LXVII. 7.)
  - 108. Learner's piece in limestone with \( \frac{1}{2} \) s and \( \sigma \) drawn in red and black, some carved, 12 cm. high (Brooklyn). (Pl. LXV. 12.)
  - 109. Fragment of limestone column drum showing the upper part of the Queen offering, 40 cm. long (Cairo). (Pl. LXVI. 1.)

<sup>&</sup>lt;sup>1</sup> [Once again by error the restored plan (Pl. XIV) gives only thirteen piers.]

- 110. Sandstone block showing upper part of a princess shaking a sistrum, 27 cm. long (British Museum). (Pl. LXVI. 3.)
- 126. Fragment of painted limestone relief showing two princesses (back to back) shaking sistra. Missing from the knees down, 26 cm. long. (Brooklyn). (Pl. LXV. 10.)
- 127. Fragment of limestone block showing back of human head and part of the Queen's cartouche, 23 cm. long.
- 128. Three large strips of blue faience, rounded on one side for inlay into the border of cartouche, 3.6 cm. wide (Cairo, Winchester, New York).
- 156. Part of limestone trial piece showing human ear, 8.8 cm. wide (Glasgow).
- 157. Part of limestone column drum showing upper part of the body (less head) of the Queen. In front the King's hand holding a censer; behind, a princess's hand holding a sistrum, 30 cm. long (New York).
- 164. Feet and part of base of limestone statuette, 11 cm. long (East Anglia).
- 165. Fragment of painted limestone column showing Aten rays in relief, 15 cm. high (Manchester).
- 178. Part of painted limestone column drum showing face of the King offering. The profile has been corrected, 30 cm. long (Cairo.)
- 179. Hand and wrist of colossal red granite statue, 31.5 cm. long. (Pl. LXVII. 7.)
- 183. Limestone block with relief showing clump of cornflowers, 43 cm. long (Brooklyn). (Pl. LXVII. 6.)
- 184. Part of sandstone relief showing front of the King's forehead and Aten rays, 22 cm. high (San Diego).
- 185. Ditto, 33 cm. square (Cairo).
- 186. Painted relief in sandstone showing most of a priest's head, 22.6 cm. high (Boston). (Pl. LXVI. 6.)
- 187. Painted relief in limestone showing the head and shoulders of a man, the back of another head in front, 24 cm. long (Ashmolean). (Pl. LXVI. 6.)
- 188. Sandstone block showing at extreme right-hand corner the figure of a princess, 22 cm. high (New York).
- 189. Painted sandstone relief showing head of bowing soldier and back of another, 31 cm. long (Manchester).
- 190. Part of painted limestone column drum showing in relief head and shoulders of the King and hands of the Queen offering, 31 cm. long (Cairo). (Pl. LXXIII. 2.)
- 191. Part of ditto, showing Queen and princesses, 31 cm. long (Cairo). (Pl. LXXIII. 2.)
- 193. Part of ditto, showing King's head, 26 cm. long (Manchester).
- 194. Part of ditto, showing part of Queen's head, 43.5 cm. long.
- 195. Part of ditto, showing head of Queen. Titles of Queen, Aten (early), and princesses and the name of the building Wbn-itn, 29.5 cm. long (British Museum).
- 196. Part of ditto, showing Queen's crown and her hands making an offering, 36 cm. long (Eton).
- 197. Part of ditto, showing Queen's head, 35.2 cm. long (Cairo).
- 199. Limestone block showing flagstaffs and part of building in relief, 25.5 cm. long (Manchester).
- 200. Sandstone block showing hands offering a circular object, 24 cm. long (Ashmolean).
- 201. Ditto, showing two female heads, 24 cm. high (British Museum).
- 202. Ditto, showing the upper part of two male figures, 26 cm. long (Boston).
- 203. Ditto, with traces of colour showing part of bound captive followed by a soldier, 24 cm. long (San Diego).
- 204. Ditto, with two bound captives, 30 cm. long.
- 205. Ditto, with spirited heads of horses, 36 cm. long (Ashmolean). (Pl. LXVI. 5.)
- 206. Limestone block showing incised clumps of papyrus in panels bordering a central rectangle, 32·2 cm. long (San Diego).
- 207. Part of painted sandstone relief showing bowing human figures, 21 cm. high (Cairo).
- 208. Ditto, with soldier leading horses, 30 cm. long (San Diego).

- 209. Ditto, with tall vase, 15 cm. high (Pl. LXVI. 2).
- 210. Limestone relief showing part of throne supported by a lioness, 34·3 cm. long (Cairo). (Pl. LXVI. 2.)
- 211. Ditto, showing legs of a man, 24 cm. high.
- 212. Painted block of sandstone showing a row of vases on stands in relief, 28 cm. long (Ashmolean).
- 213. Ditto, with head of horse, 22.3 cm. long (Brussels).
- 214. Limestone relief showing the tops of wine jars and inverted baskets, 44·7 cm. long (British Museum).
- 215. Sandstone relief showing part of brazier and openwork stand, 35 cm. long (Cairo).
- 216. Limestone fragment showing human eye, 6.2 cm. long (University College).
- 217. Limestone relief showing front of forehead of the King, 9 cm. high (Winchester).
- 218. Sculptor's trial piece in limestone showing human face, 11.5 cm. high (Brooklyn).
- 222 and 228. Part of painted limestone relief showing the head of the King, 41 cm. long (Cairo). (Pl. LXVII. 9.)
- 223. Bust of statue of Nefertiti in fine limestone, 27 cm. high (Cairo). (Pl. LXVI. 8.)
- 224. Ditto, in granite, 19 cm. high.
- 226. Toes of sandstone statuette, 8 cm. long (Cairo).
- 229. Relief in purple sandstone of un-Egyptian gentleman leading a dog, 8.6 cm. high (Cairo). (Found by the dump, may not be from here.) (Pl. LXXI. 10.)
- 234. Sculptor's trial piece in limestone with hand in relief, 13 cm. high.
- 235. Head of uraeus in painted sandstone, 4.2 cm. long.
- 237. Scarab of green glazed steatite bearing name of Ramesses II, 1.6 cm. long (Boston). (From the upper filling to the west.)
- 238. Sculptor's trial piece in limestone showing face (of the King?), 11 cm. high (Boston). (Pl. LXV. 7.)
- 240. Painted sandstone relief showing heads of Hittites (?), 20.3 cm. high (Brooklyn). (Pl. LXVI. 9.)
- 241. Fragment of granite relief showing face of the King offering, 11 cm. high.
- 242. Fragment of miniature cornice in faience, 3.7 cm. high (Archaeological Museum, Cambridge).
- 243. Part of learner's piece showing o's, 8.8 cm. high.
- 244. Lower part of torso and upper part of legs of granite statuette of princess, 13 cm. high (Glasgow).
- 245. Granite fragment lightly incised with the King's head, 17 cm. high.
- 246. Head and neck of a princess in red granite, 26 cm. high. Inscription on back does not give her name (Brooklyn). (Found the last quarter of an hour of the season's work at the extreme west end.) (Pl. LXV. 4.)
- 247. Head of the Queen in red granite, 16 cm. high (Boston). (Found with the last.) (Pl. LXV. 5.)

### The Southern extension of the Weben-Aten

- 35/1. Sculptor's trial piece in limestone showing human head, 21·5 cm. long (Brooklyn). (Pl. LXX. 4.)
  - 2. Sherd of predynastic black-topped ware (Ashmolean). (Pl. LXXIV. 2.)
  - 3. Sculptor's trial piece in limestone showing human face, 9.5 cm. high.
  - 4. Fragment of green inlay for an | hieroglyph (Cairo).
  - 5. Alabaster tetrahedron, 21 cm. high. Possibly a smoother.
  - 6. Block of limestone roughly incised with facing figure of Bes and above, 24.2 cm. high.
  - 7. Block of alabaster with scratched face of King, 20 cm. high.
  - 9. Fragment of quartzite with part of hieroglyph in relief, 8.8 cm. long.
  - 12. Sculptor's trial piece in quartzite engraved with squatting captive, a god, a hawk's head, a human head, 21.5 cm. long (Cairo). (Pl. LXV. 6.)
  - 13. Ditto, in limestone showing a human head, 19.2 cm. long (Cairo). (Pl. LXX. 3.)
  - 14. Ditto, showing mouth and chin, 10 cm. high. (Pl. LXV. 11.)
  - 15. Limestone mould for head of King, 11.6 cm. long (Brooklyn). (Pl. LXV. 11.)
  - 16. Limestone learner's piece with \( \)'s and \( \cup \)'s, 12 cm. high.

- 17. Ditto, with foot, 12.6 cm. long.
- 18. Ditto, with eye, 12 cm. long.
- 20. Ditto, in quartzite with ∅, ¬'s and ¬'s, 21 cm. high (Glasgow).
- 21. Ditto, with comic head, 10 cm. high. (Pl. LXV. 11.)
- 22. Ditto, with hawk's head, and hand, 12.2 cm. high (Manchester).
- 23. Ditto, with  $\frac{0}{1}$ ,  $\frac{1}{1}$ , and  $\frac{1}{2}$  14.1 cm. high.
- 24. Ditto, with c's and human head (?), 13 cm. long.
- 25. Ditto, with much worn human head, 19 cm. high. (Pl. LXX. 3.)
- 30. Fragment of limestone relief showing wine jars, 23.3 cm. high.
- 46. Blade of bronze chisel, 5.3 cm. long.

# The Broad Hall. From the south end to the beginning of the central pavilion

- 34/84. Sketch of hippopotamus on sherd, 8.4 cm. long (Cairo).
  - 86. Part of faience plaque showing a duck, 10.3 cm. long (Cairo). (Pl. LXXII. 9.)
  - 87. Bronze tweezers, 4.8 cm. long (Boston). (Pl. LXXII. 10.)
  - 88. Torso of female statuette in red granite, 12.5 cm. long.
  - 89. Three uraeus heads in red granite, 6.5 cm. long (Cairo and Brussels).
  - 92. Fragment of faience plaque showing wing of a bird, 7.7 cm. long (Brooklyn).
  - 93. Limestone uraeus head, 7.8 cm. long (University College).
  - 94. Part of red sandstone statuette of the Queen, 17 cm. high.
  - 95. Head lightly incised in limestone, 14.2 cm. high (San Diego).
  - 96. Arm of sandstone statuette, 7.6 cm. high (Cairo).
  - 98. Lower part of body and upper part of legs of red sandstone female statuette, 15 cm. high (New York).
  - 99. Relief of human head in sandstone, 20 cm. high (Brooklyn).
  - 100. Limestone block with male heads in relief, 40.2 cm. long (Manchester). (Pl. LXVII. 2.)
  - 101. Two fragments of faience plaques (Cairo).
  - 102. Fragment of polychrome faience uraeus, 3.5 cm. high (Cairo).
  - 103. Part of alabaster relief showing princess's head, 7.4 cm. long.
  - 104. Part of red granite stell showing upper part of princess, 15 cm. high.
  - 105. Fragment of sandstone uraeus from colossal statue, 12.8 cm. long.
  - 106. Bronze nail, 3.3 cm. long (Boston). (Pl. LXXII. 10.)
  - 107. Painted sandstone block showing bowing figure in relief, 22 cm. square (Otago).
  - 111. Torso of quartzite female statuette, 11 cm. high (Cairo). (Pl. LXXIII. 7.)
  - 112. Three fragments of sandstone column drums inlaid in faience (Cairo).
  - 113. Lower lip and chin of colossus in sandstone, 13 cm. across (University College).
  - 114. Hand and foot of sandstone statuette. (Pl. LXXI. 8.)
  - 115. Six fragments of faience for inlay (Cairo and San Diego).
  - 116. Uraeus head-dress with beginning of plumes from red sandstone colossus of the Queen, 58 cm. long.
  - 117. Fragment of sandstone relief showing a face, 5 cm. high. (Pl. LXXI. 8.)
  - 118. Human head and hand of Aten ray in faience for inlay, 1.9 and 5 cm. (Ashmolean and Glasgow).
  - 119. Part of limestone plaque showing princess in relief, 10.5 cm. high (Cairo). (Pl. LXXI. 8.)
  - 120. Part of alabaster relief showing a princess, 18 cm. high (Ashmolean).
  - 121. Fragment of alabaster relief showing breast and hands of the Queen.
  - 122. Ditto, showing top of shaven head, 13 cm. long.
  - 123. Two fragments of sandstone colossi hips, 17 cm. and 9 cm. long (Cairo and University College).
  - 124. Three fragments of faience (Brussels).
  - 125. Part of black granite stela showing altar, 16 cm. high.
  - 129. Painted limestone relief showing head of a princess, 18 cm. long (New York).

- 130. Lower part of torso and kilt of granite statue of the King originally holding an offering-table, 25 cm. high (Brussels).
- 131. Stomach of sandstone statue, 10.5 cm. high (University College).
- 132. Foot of sandstone statuette, 9 cm. long. (Pl. LXXI. 8.)
- 133. Fragment of painted limestone relief showing negro's face, 6 cm. high (Eton). (Pl. LXXI. 8.)
- 134. Fragment of alabaster plaque showing back of princess in relief, 4.25 cm. high.
- 135. Stomach of sandstone statuette of the Queen, 14 cm. high.
- 136. Fragment of sandstone relief showing decoration, 11 cm. long.
- 137. Part of kilt of granite statuette, 9 cm. high.
- 138. Ditto, in sandstone, 9 cm. high.
- 139. Ditto, in alabaster, 9 cm. high.
- 140. Ditto, of sandstone, 6 cm. high (Cairo).
- 141. Part of alabaster plaque showing princess in relief, 12 cm. high (Brussels). (Pl. LXVII. 11.)
- 142. Fragment of black granite stela, 18 cm. high.
- 143. Ditto, 15.5 cm. high.
- 144. Foot of sandstone statuette, 9 cm. long.
- 146. Faience for inlay. Rim of cartouche, hawk, and --- (Cairo).
- 147. Fragment of sandstone relief showing Aten rays, 16.2 cm. long (Boston).
- 148. Ditto, in limestone, 10.5 cm. long (Cairo).
- 149. Sandstone relief of princess. Hair and robe hollowed for inlay, 12 cm. long. (Pl. LXVII. 11.)
- 150. Ditto, of the Queen, 23 cm. long (Cairo).
- 151. Limestone relief of bowing negroid head, 14 cm. high (British Museum).
- 152. Part of torso of statuette in sandstone, 6 cm. high.
- 153. Limestone relief of bowing servant, 15 cm. square (Ashmolean).
- 154. Shoulder of sandstone statue bearing early Aten cartouche, 11.2 cm. high.
- 155. Three fragments of faience for inlay (Manchester and Cairo).
- 158. Ear in sandstone, 6 cm. high (Cairo).
- 159. Lower part of wig and shoulder of sandstone statue of the Queen, 17.5 cm. high.
- 160. Part of robes of limestone statue, 11 cm. high (Glasgow).
- 162. Part of limestone relief showing Aten rays, 12 cm. long (Glasgow).
- 163. Limestone bowl, 18 cm. diameter, 9 cm. depth (Ashmolean). (Pl. LXIII. 6.)
- 166. Torso of princess from sandstone dyad, 22 cm. high (Cairo). (Pl. LXIX. 3.)
- 167. Part of sandstone column showing head of King in relief, painted, 30 cm. long (Brooklyn). (Pl. LXVII. 1.)
- 168. Part of white faience plaque showing knee and hands of seated human figure, 9.5 cm. high (Cairo).
- 169. Heel and ankle for inlay in sandstone, 6.5 cm. high. (Pl. LXXII. 9.)
- 170. Five fragments of faience plaques (Manchester).
- 171. Knee of robed sandstone colossus, 20 cm. high.
- 172. Two fragments of faience plaques (Brussels).
- 173. Hand of sandstone statuette, 6 cm. long (Otago).
- 174. Thighs of granite statue, 22.2 cm. high.
- 175. Fist of colossal granite statue, 20 cm. long. (Pl. LXVII. 7.)
- 176. Torso of granite female statuette, 13 cm. high (East Anglia).
- 177. Nile fish in gold plate, 17 cm. long (Cairo). (Perhaps from the Harem.) (Pl. LXXIII. 5, 6.)
- 181. Hand of granite statuette holding scarf, 6.5 cm. long.
- 182. Sherd of Late Helladic IIIa pilgrim flask (Brooklyn).
- 219. Head of uraeus from granite colossus, 7.3 cm. long.
- 220. Mouth of granite colossus, 16 cm. long.
- 221. Sculptor's trial piece in limestone showing two heads, one sketched in red, the other carved, 19·1 cm. square (Cairo). (Pl. LXVII. 12.)

- 225. Fist of granite colossus, 14 cm. long. (Pl. LXVII. 7.)
- 227. Corner of uraeus cornice in painted sandstone, 14 cm. long.
- 230. Fragment of alabaster relief showing torso of bound captive, 45 cm. long.
- 231. Head of uraeus from granite colossus, 3.6 cm. long.
- 232. Part of fist of granite colossus, 10 cm. across.
- 233. Eye of granite colossus, 11 cm. long.

Pendant double cartouche showing early Aten names, Type IV. E. 5.

Also many thousand fragments of granite and sandstone colossi (Pl. LXVII. 8), the fragments of inscriptions invariably showing the early Aten name.

Petrie (op. cit. 8) found by the eastern causeway over the Hall fragments of the alabaster balustrade showing in relief the King and Queen making offerings. The earlier Aten name is inscribed. (Pl. LXIX. 4, 5.)

# The Broad Hall. From the central pavilion westwards

- 35/34. Part of head of sandstone statuette of the King, 9.5 cm. high.
  - 37. Fragment of sandstone dyad of princesses, 11 cm. high (Wellcome Museum).
  - 40. Fragment of faience fish-plaque, 6.2 cm. long.
  - 43. Black faience inlay? bird's head (Cairo).
  - 44. Faience inlay \$\(\psi\), 3.8 cm. high.
  - 45. Fragment of grey granite relief showing the Queen offering, 20 cm. high (San Diego).
  - 47. Fragment of painted limestone relief from a column showing royal head, 14 cm. high (Cairo).
  - 48. Hand of Aten ray in quartzite for inlay, 7.2 cm. long (Ashmolean). (Pl. LXXII. 8.)
  - 49. Wigs for inlay in granite and faience (Cairo).
  - 50-3. Fragments of faience tile (some to Glasgow).
  - 58. Cow's head in sandstone for inlay, 7.1 cm. long (Cairo). (Pl. LXXII. 8.)
  - 59. Fragment of black granite wig, 7 cm. long.
  - 60. Part of bull's head in black granite for inlay, 5.2 cm. long.
  - 63. Limestone block showing soldiers in painted relief, 21 cm. high.
  - 64-7. Fragments of faience plaques (Manchester and Boston). (Pl. LXXII. 5.)
  - 68. Two fragments of sandstone torso and arms in relief for inlay, 12 cm. high (Ashmolean).
  - 69, 70. Limestone reliefs from a column showing parts of King's head, 27 cm. long.
  - 72. Ditto, showing princess and legs of Queen, 42 cm. long (Boston). (Pl. LXXIII. 3.)
  - 77. Uraeus head in blue faience, 2.4 cm. long.
  - 78. Painted sandstone block showing bowing figures. The figure of one has been plastered over to allow the name of Meketaten to be inserted, 20 cm. square (Brussels). (Pl. LXVII. 10.)
  - 79. Limestone block showing fan-bearer, 36 cm. long (San Diego). (Pl. LXX. 10.)
  - 80. Part of flail from sandstone statue, 12 cm. high (Cairo).
  - 81. Fragment of painted limestone relief showing royal face, 10·1 cm. high (Manchester).
  - 82. Very battered head of limestone statue of the Queen, 2.9 cm. high.
  - 83. Two fragments of faience fish-plaque, one with ink sketch of fish on the back (Glasgow).
  - 84, 85. Fragments of faience plaques.
  - 86. Sandstone hand of Aten ray for inlay, 6.5 cm. long (Cairo). (Pl. LXXII. 8.)
  - 87, 89. Fragments of faience inlays.
  - 90. Bronze nail, 1.9 cm. long.
  - 91. Fragment of granite relief showing King's head, 12 cm. long.
  - 93. Wig in black granite for inlay, 5.3 cm. high (Manchester).
  - 94. Part of faience plaque, 5 cm. high (San Diego).
  - 97. Limestone block with relief of ears of corn and leaves, 30 cm. long (Cairo). (Pl. LXVIII. 7.)
  - 102. Fragment of sandstone relief showing head of princess, 1.2 cm. high (Fitzwilliam).
  - 103. Fragment of sandstone column showing part of princess, 19 cm. high.

- 104. Fragment of granite showing part of face and hand, 15.5 cm. long.
- 105. Three inlays of granite (Cairo).
- 113. Fragment of sandstone showing top of wig in relief, 8.7 cm. high.
- 117. Uraeus head in granite, 3.8 cm. long (Cairo).
- 120. Part of face of colossal statue in sandstone (Cairo).
- 128. Three fragments of faience plaques (Otago).
- 129. Chin and shoulders in painted sandstone relief, 11 cm. high.
- 130. Fragment of relief in sandstone showing human figure, 8.5 cm. high (Cairo).
- 133. Fragment of limestone relief showing back of princess, 16 cm. long (Cairo).
- 134. Two fragments of faience (Cairo).
- 145. Two fragments of faience (San Diego).
- 146. Limestone block with relief of bowing foreigner, 21.6 cm. long.
- 154. Lips from sandstone colossus, 8.5 cm. across.
- 163. Part of relief in quartzite showing princess, 10 cm. high (Brooklyn). (Pl. LXXI. 2.)
- 170. Learner's piece in limestone with ⇒'s, 11 cm. high.
- 171. Quartzite relief of hands at the end of rays, 7.7 cm. high.
- 172. Ditto, of foot, 10·1 cm. high.
- 173. Small block of crystalline limestone inscribed on both sides with royal names, 5 cm. long.
- 174. Fragments of black faience inlay for large \$\frac{1}{2}\$ signs (Cairo).
- 175. Two faience inlays (Cairo).
- 185. Elbow of purple sandstone statuette, 9 cm. across.
- 186. Fragment of alabaster relief showing princess, 12 cm. high (Otago). (Pl. LXXI. 5.)
- 187. Three faience inlays.
- 188. Faience Aten disk for inlay, 7.4 cm. diameter (Cairo).
- 189. Fragment of ditto.
- 194. Fragment of quartzite relief showing offering scene, 21.5 cm. long.
- 195. Fragment of granite stela showing relief of princess and part of Queen, 25 cm. high (Manchester).
- 197. Fragment of quartzite relief showing Queen's arm and breast, 13 cm. long.
- 198, 199. Fragments of limestone relief showing face and hands.
- 200. Fragment of quartzite relief showing head of King offering, 20 cm. high (Wellcome Museum).
- 201. Fragment of relief in alabaster showing head of captive, 5.6 cm. high.
- 203. Part of quartzite relief showing King offering in front of loaded altar, 19 cm. high (Cairo).
- 204. Limestone block showing relief of sphinx, 25 cm. long.
- 205. Fragment of alabaster relief showing King's face, 6.5 cm. high (Cairo). (Pl. LXXI. 1.)
- 206-8. Ditto, showing foreign captives.
- 214. Fragment of quartzite relief showing Princess Meritaten, 20 cm. high (Cairo). (Pl. LXX. 12.)
- 215. Fragment of granite relief showing Queen, 15 cm. high (Otago).
- 216. Fragment of quartzite relief showing royal head.
- 217. Fragment of faience, 3.8 cm. long (Cairo).
- 227. Fragment of quartzite relief showing rays above a flower, 21 cm. long (Cairo).
- 228. Limestone block with relief of sleeping man, 21 cm. long (Cairo). (Pl. LXVII. 5.)
- 229. Ditto, with shaven head, 22 cm. high (Norwich). (Pl. LXVII. 5.)
- 230. Ditto, with soldier's head, 23 cm. high.
- 231. Part of limestone offering-table with royal and divine names, 11 cm. long.
- 232. Fragments of faience for inlay (Norwich).
- 235. Fragment of faience uraeus, 2.2 cm. high (Cairo).
- 236. Fragment of alabaster showing relief of King, 28 cm. high (Wellcome Museum).
- 237. Torso of granite statuette of princess, 15 cm. high (Brooklyn). (Pl. LXIX. 2.)
- 238. Fragment of quartzite relief showing head of the King (Fitzwilliam).
- 253. Part of granite relief of the Queen, 13 cm. long (Cairo).
- 254. Part of limestone relief showing human head, 8.5 cm. long (Boston).

- 255. Ditto, showing flowers, 19 cm. long (Cairo).
- 260. Torso of sandstone statuette of princess, 7.5 cm. high. (Pl. LXIX. 2.)
- 261. Ditto, of Meritaten, 23 cm. high (San Diego). (Pl. LXIX. 2.)
- 262. Sandstone relief showing Aten rays and offerings, 21.5 cm. high (Cairo).
- 263. Ditto, of princess, 15 cm. long.
- 264. Relief of painted limestone showing princess's head, 19 cm. high (Boston). (Pl. LXXIII. 1.)
- 265. Ditto, showing hand offering a vase, 15 cm. long (Wellcome Museum).
- 266. Ditto, showing man seated, 21 cm. high.
- 267. Ditto, of sandstone showing capital of column, 15·1 cm. long.
- 268. Wig of black granite for inlay, 7.6 cm. high (Otago).
- 269. Foot of sandstone statuette, 6·1 cm. long.
- 271. Disk with uraeus in black granite for inlay (Norwich).
- 279. Painted limestone relief showing women seated outside a door, 34·2 cm. long (San Diego). (Pl. LXVII. 3.)
- 280. Limestone relief showing part of royal head, 15.5 cm. long (Boston).
- 281. Stomach of quartzite statuette, 14 cm. high.
- 295. Limestone block with vases and legs of man in relief, 25 cm. long.
- 298. Part of sandstone relief (Wellcome Museum).
- 299. Block of sandstone with relief of vases and offerings, 30 cm. long.
- 300. Ditto, with panel of papyrus, 25 cm. long (Glasgow).
- 301. Fragment of limestone column with incised foliage, 45 cm. long.

Ring of Akhenaten, Type I. A. 2 i.

Also Petrie (op. cit. 11 and Pl. IX). Sandstone block showing two gazelles and foliage, 54 cm. long.

### The Court south of the Broad Hall: East end

- 35/38. Sandstone relief showing legs, 15 cm. long (Cairo).
  - 42. Tail of bird in faience for inlay, 1.8 cm. long.
  - 54. 

    in black glass for inlay 

    incised on back, 3·3 cm. long (Cairo).
  - 55. Fragment of glazed bowl, 3.6 cm. long (Norwich).
  - 57. Head of \( \gamma \) sign in faience for inlay, 2.2 cm. long.
  - 75. Fragment of human eye and brow in faience, 2 cm. high (Cairo).
  - 92. Four fragments of faience inlays (Otago).
  - 96. Alabaster finial, 4 cm. high.
  - 98. Lapis lazuli bead with gold mounting, 1.25 cm. long (Cairo).
  - 99. Body of uraeus in limestone inlaid with faience, 20 cm. high (Cairo).
  - 100. Sandstone relief showing a princess, 16.5 cm. high (Wellcome Museum).
  - 101. Fragment of faience knob of box with early Aten name, 2.2 cm. high (Cairo).

Also column fragments. (Pl. LXIX. 6.)

# West end

- 35/381. Limestone block incised with papyrus, 17 cm. high.
  - 382. Sherd of Late Helladic IIIa ware (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 3.)
  - 389. Sandstone block with human figure in relief, 22.5 cm. high.
  - 400. Fist of colossal sandstone statue (Norwich).
  - 401. Fragment of sandstone relief showing princess's head, 9.3 cm. high (Manchester).
  - 403. Ditto, 11 cm. long.
  - 404. Learner's piece in limestone with o's on both sides, 14 cm. long.
  - 405. Hand from Aten ray in sandstone for inlay, 4.8 cm. long.
  - 406. Two fragments of faience plaques (Cairo).
  - 414. Fragment of quartzite head for inlay, 8.3 cm. high (Manchester).

- 425. Sandstone block with upper part of human figure in relief, 17.5 cm. long (Norwich).
- 442. Back of head of princess in sandstone, 10·1 cm. high.
- 443. Fragment of granite bowl with early Aten names round rim, 13 cm. long.
- 444. Fragment of limestone relief showing human face, 8.8 cm. high.
- 451. Fragment of quartzite relief showing Aten rays over flowers, 15 cm. long (Ashmolean).
- 452. Fragment of black granite stela, 16 cm. high.
- 453. Fragment of red granite stell showing rays and offerings, 16.3 cm. high.
- 454. Fragments of two faience plaques (Cairo).
- 455. Fragment of limestone relief showing human head, 4.2 cm. high.
- 476. Top of wig of limestone statue.
- 477. Fragment of limestone trial piece showing human head, 11.5 cm. high (Fitzwilliam).
- 479. Fragment of sandstone inlay of feathers, 7.7 cm. long (Manchester).

### Foundation deposit

35/486. Potsherd with sketch of the King's face in ink, 8.9 cm. long (Cairo). (Pl. LXXIV. 2.)

### The Bridge: 1. The approach from the west

- 35/108. Block of sandstone inlaid with faience, 8.5 cm. long.
  - 109. Fragment of human face in limestone, 6 cm. high.
  - 110. Fragment of faience bowl, 3.8 cm. high (Cairo).
  - 111. Fragment of faience inlay.
  - 124. Fragment of wig in blue faience, 6.5 cm. long.
  - 125. Limestone block with head of King in relief, 27 cm. long (Cairo).

Pendant in form of double cartouche showing the early Aten names, Type IV. E. 5.

Also limestone blocks showing princess prostrated (Pl. LXX. 11) and building with Hathor-headed column. (Pl. LXX. 8.)

# 2. The Bridge proper

- 35/339. Base of limestone statuette, the feet treading on enemies, 17 cm. long (Cairo). (Pl. LXXI. 3.)
  - 340. Potsherd, whitewashed, with design of face in black, 9.7 cm. high.
  - 341. Learner's piece in limestone with upper part of a 's, 6.3 cm. high.
  - 365. Sculptor's trial piece in limestone showing part of face corrected in red ink, 9.5 cm. long. (Pl. LXX. 2.)
  - 366. Ditto, 5.5 cm. long. (Pl. LXX. 2.)
  - 367. Ditto, with legs and skirt, 3.8 cm. high.
  - 368. Ditto, with ⇒'s, 7 cm. high.
  - 369. Potsherd, with drawing of clenched hand, 14.5 cm. long (Otago).
  - 370. Part of head of royal statue in crystalline limestone, 19 cm. high (Cairo). (Pl. LXXI. 4.)
  - 371. Part of wig in granite, 14.5 cm. high (Cairo).
  - 373. Parts of two small L. H. IIIa amphoras (Cairo). (Pl. CIX. 5.)
  - 373a. Sculptor's trial piece showing head of King sketched out in ink, and hand, 14 cm. long (Brooklyn) (Pl. LXX. 2.)
  - 378. Fragment of faience tile, 6 cm. long (Norwich).
  - 379. Fragments of faience fish-bowl.
  - 380. Sketch in ink on potsherd showing an abduction and its consequences, 18 cm. long (Cairo). (Pl. LXXIV. 3.)
  - 383. Fragmentary group of monkeys in limestone, 4 cm. high.
  - 384. Fragment of faience tile, 4.8 cm. long (Cairo).
  - 385. Part of foot of limestone statuette, 4.2 cm. long.
  - 386. Fragment of faience dish.

36/37. Inlay of white faience. (Pl. LXXII. 6.)

Two faience rings with name of Smenkhkarët, Types I. A. 3a, I. A. 3c.

For objects from the east part of the Bridge and its approach in the garden of the Royal Estate see below, pp. 88, 89.

The Southern Section: 1. The Central Halls. Axis and east of Axis

- 35/470. Bone weaving-tool. (Pl. CIX. 3.)
  - 480. Three fragments of faience.
  - 481. Three limestone roundels.
  - 482. Faience bird for inlay, headless, 5.2 cm. long (Cairo). (Pl. LXXII. 5.)
  - 483. Fragments of faience vessels inscribed with later Aten name (Cairo and Manchester).
  - 484. Fragments of faience kohl tubes inscribed with name of Queen and royal daughter.
  - 485. Fragment of faience tile (Manchester).
  - 487. Sculptor's trial piece in limestone showing human head and hand, 19 cm. high (Brooklyn).
    (Pl. LXX. 6.)
  - 488. Fragments of sandstone statuettes bearing the early Aten names.
  - 489. Three fragments of faience (Cairo, Norwich, Otago).
  - 490. Sketch-plan in red ink on limestone, apparently a plan, 13 cm. long.
  - 491. Learner's piece. S's in ink on a sherd. (Pl. LXXIV. 2.)
  - 492. Sherd of Late Helladic IIIa ware, 7.6 cm. long (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 3.)
  - 493. Limestone block showing top of a head, 19 cm. long.
  - 494. Fragment of wig from a limestone statue, 5.5 cm. high.
  - 495. Limestone block with head in relief, 17 cm. long.
  - 496. Learner's piece with ∵'s.
  - 497. Fragment of face in relief in quartzite, 15 cm. high.
  - 498. Four fragments of faience plaques (Cairo and Glasgow).
  - 499. Head of uraeus in painted sandstone with crown. From a cornice, 20 cm. long.
  - 500. Part of relief of woman playing on a lyre, 23 cm. long (Cairo).
  - 501. Limestone roundel, 3 cm. diameter.
  - 505. Sculptor's trial piece. Head of King on one side, facing head of Bes on the other, 12 cm. square (Cairo). (Pl. LXXI. 5.)
  - 506. Fragment of limestone relief showing offering-tables, 20 cm. long.
  - 507. Limestone block showing relief of heads of musicians, 28 cm. long (Brooklyn). (Pl. LXVII. 4.)
  - 508. Fragments of sculptor's trial pieces.
  - 509. Part of faience knob of box inscribed with early Aten names, 4.3 cm. across (Cairo).
  - 510 and 511. Fragments of faience plaques (some in Cairo).
  - 512. Sculptor's trial piece in limestone. On one side hieroglyphs, on the other a face, 22 cm. long (Cairo).
  - 513. Limestone block with relief of the King as a sphinx, space for faience inlays below, 37 cm. long (Brooklyn). (Pl. LXVIII. 3.)
  - Also unnumbered block like 513. (Pl. LXVIII. 4.)
  - 514. Limestone relief of Aten rays and the King's hands offering a vase, 23.6 cm. high (Cairo). .
  - 515. Two fragments of faience plaques (San Diego).
  - 516. Fragment of granite with face in relief, 6 cm. square.
  - 517. Toe of sandstone statue.  $1\frac{1}{2}$  times life-size.
  - 518. Limestone block with face in relief, 18 cm. long.
  - 519. Part of faience wand showing bottom of Queen's cartouche, 7 cm. long (Manchester).
  - 520. Fragment of faience plaque (Cairo).
  - 521. Fragment of red sandstone stell showing Queen's feathers, 10 cm. high (Ashmolean).

- 522. Crowned uraeus head, as 499.
- 523. Fragment of granite stela showing King offering early Aten names, 19 cm. high.
- 524. Potsherd with sketch of hawk and disk in red ink, 9.2 cm. long (Cairo).
- 525. Part of limestone block showing man's head, 25 cm. high.
- 526. Ditto, showing lower part of King's head, 12 cm. long.
- 527. Fragment of black granite statuette, 16.2 cm. high.
- 529. Hawk's head in faience, 2.5 cm. high (Ashmolean).
- 530. Impression of second cartouche of early Aten name in plaster, 11 cm. high (Boston).
- 531. Limestone block with relief of princess, 22 cm. high.
- 532. Learner's piece with head of hawk, 10 cm. wide.
- 533. Human torso in faience for inlay, 6 cm. high (Cairo). (Pl. LXXII. 5.)
- 535. Limestone block with head of bull and (?) disk between the horns, 35 cm. long (Brooklyn). (Pl. LXX. 9.)
- 536. Ditto, with three faces in relief, 23 cm. square (Ashmolean).
- 537. Corner of limestone uraeus cornice, one side inlaid, the other painted, 19 cm. high (Ashmolean).
- 538. Fragment of limestone with ink sketch of muscular individual, 22.4 cm. high.
- 539. Legs of kneeling statuette in quartzite, 7 cm. high.
- 540. Sculptor's trial piece in limestone with head of the King, 8 cm. high (Cairo).
- 541. Ditto, with hand, 10.4 cm. long (Cairo).
- 542. Fragment of quartzite with princess's head, 3.2 cm. high.
- 543. Fragment of limestone column with attendants in chariots in relief, 33 cm. long.
- 544. Limestone block showing Aten rays descending on an altar, 23 cm. square.
- 545. Fragment of sandstone showing female legs in relief, 10.2 cm. high.
- 546. Part of granite relief showing head of Queen.
- 547. Limestone block with head in relief, 10 cm. long.
- 548. Roughly incised block of limestone, 14.8 cm. high.
- 549. Learner's piece with ⇒'s.
- 550. Part of uraeus cornice of the type of 499 (Cairo).
- 551. Limestone block showing chariot wheels and horses' legs, 22 cm. long (Otago).
- 552. Rough relief of bird on nest in limestone, 12 cm. square.
- 553. Learner's piece marked with ⇒'s in ink.
- 554. Fragment of alabaster vessel with name of Nefer-neferu-aten-ta-sheri, 6·3 cm. high.
- 556. Fist from colossus of sandstone, 17 cm. long.
- 557. Fragment of faience wand inscribed with name of 'Ankhesenpaaten, 2.8 cm. high.

#### West of Axis

- 36/1. Limestone block with centre part of King's head in relief, 30 cm. long.
  - 2. Ditto, with seated figure, 22 cm. high.
  - 3. Fragment of statue in polished quartzite, 13 cm. long.
  - 4. Uraeus head as 35/499.
  - 5. Fragment of relief showing front of royal headcloth, limestone, 4 cm. high.
  - 6. Fragments of faience.
  - 7. Limestone block showing dwarf seated before pillar, 25 cm. long (Cairo). (Pl. LXVIII. 5.)
  - 8. Ditto, showing heads of soldiers, 30 cm. long (Brussels).
  - 9. Two fragments of inlaid uraeus cornice in sandstone, 23 cm. high.
  - 10. Hawk hieroglyph for inlay in faience, 6 cm. high. (Pl. LXXII. 6.)
  - 11. Limestone block showing soldiers and a building, 25 cm. long (Cairo). (Pl. LXVIII. 6.)
  - 12. Two fragments of painted limestone relief of the King's head and shoulders, 22 cm. high (Cairo).
  - 13. Part of sandstone stela showing a princess, 16.2 cm. high.
  - 14. Limestone block showing two heads in relief, 21.4 cm. long.
  - 15. Ditto, showing servant and vases, 25 cm. square (Ashmolean).

- 16. Ditto, showing fan bearers, 25 cm. square (San Diego).
- 17. Sculptor's trial piece in limestone showing head and hand, 18 cm. high (Cairo). (Pl. LXXI. 9.)
- 18. Fragments of two wigs in black granite for inlay.
- 19. Part of limestone block showing the head of the King or Queen kissing a princess, 17 cm. high (Cairo). (Pl. LXX. 7.)
- 20. Limestone block showing head of princess being suckled, 30 cm. long (Brooklyn).
- 21. Ditto, showing top of King's head, 18 cm. high (University College).
- 22. Ditto, showing bowing servant, 29 cm. long (Fitzwilliam).
- 23. Ditto, showing princess and her little sister, 34 cm. long (Boston).
- 24. Ditto, showing bowing servant, 23 cm. high (Brooklyn).
- 25. Fragment of limestone stell showing necklace, 6 cm. high (Ashmolean).
- 26. Sculptor's trial piece in limestone showing head, 12.5 cm. high (Glasgow). (Pl. LXXI. 9.)
- 27. Unfinished statuette of monkey in limestone, 6.5 cm. high (Manchester).
- 28. Learner's piece in limestone with  $\{ , _{\triangle} \}$ , and lips, 16 cm. high (Ashmolean).
- 29. Sunk relief of ibex in limestone, 26 cm. long (Ashmolean). (Pl. LXVIII. 2.)
- 30. Bronze chisel, 22 cm. long (Cairo). (Pl. LXXIX. 3.)
- 31. Fragment of limestone showing man gazing helplessly at offering-tables, 9.5 cm. long.
- 32. Learner's piece with \( \)'s and \( \triangle 's, 15 cm. high. \)
- 52. Fragment of red granite stela. Part of King's head on one side, Aten rays on the reverse, 19 cm. high (Boston).
- 62. Ear of animal in faience, 12.2 cm. long. (Pl. LXXII. 6.)

Also many fragments of the inlaid uraeus cornices and the entablature, as well as other inscribed blocks. (Pls. LXVIII. 1, 8, 9; LXIX. 7.)

# 2. The rooms flanking the Central Halls: a. West

- 36/33. Sculptor's trial piece showing head, \$\int \bar{P}\$ and an ear, 12 cm. high (Cairo). (Pl. LXXI. 9.)
  - 34. Block of limestone showing women with raised hands, 24 cm. long (Cairo).
  - 35. Fragments of faience tiles.
  - 38. Block of limestone with conversation piece outside a building, 27 cm. long (Boston). (Pl. LXX. 7.)
  - 39. Ditto with head and back of bowing servant, 37 cm. long (Brooklyn).
  - 40. Fragment of limestone column showing part of recumbent calf and Aten rays, 25 cm. high (Cairo). (Pl. LXIX. 8.)
  - 41. Loomweight of sandstone, 6 cm. high.

### b. East

- 35/411. Part of sculptor's trial piece in limestone with face, 10·2 cm. long (Brooklyn). (Pl. LXX. 1.)
  - 412. Chip of limestone with head sketched in black and red, 12 cm. high (Brooklyn). (Pl. LXX. 2.)
  - 415. Sherd of Late Helladic IIIa ware (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 3.)
  - 416. Four fragments of faience plaques (San Diego).
  - 417. Two ditto.
  - 418. Two ditto (Glasgow).
  - 419. Impression of upper part of first cartouche of early Aten name in plaster, 25 cm. high, joins with 322a (from the South Court) (Cairo). (Pl. LXXI. 7.)
  - 420. Ditto, of  $\subseteq$ , 19 cm. wide (Otago). (Pl. LXXI. 7.)
  - 421. Ditto, of  $\triangle$  [perhaps  $\triangle$ ]. (Pl. LXXI. 7.)
  - 422. Head of ibex in pottery from a vase, 7.5 cm. long (Cairo).
  - 430. Three learner's pieces with ▽.
  - 434. Part of faience plaque showing a bird, 3.8 cm. wide (Boston).
  - 435. Part of faience kohl tube with Queen's name, 3.4 cm. high (Cairo).
  - 436. Part of faience vase similarly inscribed, 5.4 cm. long (Cairo).
  - 437. Ditto, with King's name, 2.5 cm. high.

- 438. Uraeus head in faience, 3.8 cm. long. (Pl. LXXII. 7.)
- 439. Sculptor's trial piece in limestone showing face, 7.5 cm. wide (Norwich). (Pl. LXX. 2.)
- 440. Ditto, showing female head of un-Egyptian type, 22 cm. long (Boston). (Pl. LXX. 1.)
- 441. Three fragments of faience, one has later Aten name.
- 446. Wig from quartzite statuette, 15 cm. high (Cairo).
- 447. Limestone block showing legs of attendants, 25.5 cm. long.
- 448. Fragment of faience, 6.4 cm. long (Cairo).
- 449. Uraeus head in faience, 3 cm. long. (Pl. LXXII. 7.)
- 450. Toe from sandstone colossus, 11 cm. long (Cairo).
- 456. Elbow of quartzite statue, 23 cm. long.
- 457. Limestone block showing men dancing, 24 cm. long (Ashmolean).
- 458. Ditto, showing head and arm, 35 cm. long.
- 459. Fragment of sculptor's trial piece showing face, 13.3 cm. high.
- 460. Fragment of wig and ear in faience, 4.3 cm. high.
- 461. Learner's piece with 

  's, 14 cm. high.
- 462. Fragment of faience, 6.0 cm. wide (Boston).
- 463. Ditto, 3 cm. across.
- 464. Limestone block showing men with raised arms, 21.8 cm. square (Manchester).
- 465. Ditto, showing soldiers, 22 cm. high.
- 466. Three fragments of faience.
- 472. Ditto.

Ring with name of Amenophis III, Type I. A. 1a.

Three rings with name of Akhenaten, Types I. A. 2a, I. A. 2b (2).

### 3. The South-East Courts: a. South

- 35/284. Five fragments of faience (Cairo).
  - 289. Two sherds of Late Helladic IIIa stirrup vases (Museum of Classical Archaeology, Cambridge).
  - 290. Two alabaster roundels, 2.7 cm. diameter. (Pl. LXXI. 1.)
  - 304. Limestone door-stop, 23 cm. long (Ashmolean).
  - 305. Seven sherds of Late Helladic IIIa ware (British Museum).
  - 306. Fragment of faience kohl pot inscribed with King's name, 2.1 cm. high (Norwich).
  - 307. Three fragments of faience (Cairo).
  - 314. Sherd with drawing of man with raised arms, 11 cm. high.
  - 315. Two sherds of Late Helladic IIIa ware (British Museum).
  - 316. Two fragments of faience (Cairo and Manchester).
  - 317. Three fragments of faience inlay (Otago).
  - 319. Faience button in form of daisy, 2.3 cm. diameter (Cairo). (Pl. LXXII. 5.)

### b. Centre

- 35/308. Sherd with ink sketch of the King walking, 13.5 cm. high (Manchester).
  - 309. Four pieces of faience tiles (Otago and Boston).
  - 310. Six sherds of Late Helladic IIIa ware. Three from pilgrim flasks (British Museum).
  - 311. Four fragments of faience, one inscribed on both sides with King's name.
  - 312. Three ditto (Ashmolean and Cairo).
  - 324. Six sherds of Late Helladic IIIa ware (British Museum and Museum of Classical Archaeology, Cambridge).
  - 325. Hand from Aten ray in sandstone for inlay, 5.2 cm. long (Cairo).
  - 326. Two fragments of faience (Cairo).
  - 330. Two hawks' heads in faience, 1.6 cm. high (San Diego and Glasgow). (Pl. LXXII. 7.)
  - 331. Foot of faience figurine, 1 cm. high (Otago). (Pl. LXXII. 7.)
  - 332. Clay vase with red paint inside, 9.6 cm. diameter (Cairo).

- 333. Alabaster lid, 11.2 cm. diameter (Otago).
- 334. Foot and base of granite statuette, 8.2 cm. long.
- Two faience rings with the name of Smenkhkare, Types I. A. 3a and I. A. 3f.
- Pendant in form of double cartouche with early Aten names, Type IV. E. 5.

### c. North

- 35/344. Four fragments of faience tiles.
  - 345. Ditto (Boston and Norwich).
  - 346. Two ditto.
  - 347. Part of faience plaque, 7 cm. long (Cairo).
  - 348. Part of faience bowl, 6.3 cm. long (Cairo).
  - 349. Three sherds of Late Helladic IIIa ware (British Museum).

    Cypriote sherd (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 3.)
  - 350. Sculptor's trial piece in limestone showing head, 12 cm. high (San Diego). (Pl. LXX. 1.)
  - 351. Limestone block showing bowing figure, 15 cm. long.
  - 352. Fragment of faience with Aten names (Otago).
  - 353. Two fragments of faience.
  - 354. Ditto (Glasgow).
  - 355. Uraeus head in blue faience, 4.6 cm. long (San Diego). (Pl. LXXII. 7.)
  - 356. Three fragments of faience.
  - 357. Two ditto (Cairo). (Pl. LXXII. 7.)
  - 358. Four ditto (Cairo), one joins 288 from Entrance to Coronation Hall. (Pl. LXXII. 5.)
  - 359. Two sherds of Late Helladic IIIa ware (British Museum).
  - 360. Cow's head apparently for inlay but pierced, 4·1 cm. high (Cairo). (Pl. LXXII. 8.)
  - 361. Fragment of limestone relief showing back of wig, 12 cm. high.
  - 362. Ditto, showing head, 9.5 cm. high.
  - 363. Ditto, 6 cm. high (Otago).
  - 364. Fragment of hand of Aten ray in sandstone for inlay, 5.6 cm. long.
  - 387. Hawk's head in faience, 3.6 cm. high.

#### The South Court

- 35/285. Fragment of painted pottery, 4.8 cm. long. (Pl. LXXIV. 2.)
  - 286. Fragment of faience vessel.
  - 287. Two fragments of alabaster bowl (Cairo). (Pl. LXXI. 1.)
  - 302. Impression of Queen's titles in plaster, 18.8 cm. square (Cairo). (Pl. LXXI. 7.)
  - 318. Ditto, ♀ ☐. (Pl. LXXI. 7.)
  - 320. Life-size head in limestone, unfinished. Face broken, 32 cm. high. (Pl. LXXI. 13.)
  - 322. Impressions of Aten cartouches in plaster. One joins 419 from Rooms flanking Central Halls to East. (Pl. LXXI. 7.)
  - 323. Ditto, with cartouche of King, 21 cm. long (San Diego). (Pl. LXXI. 7.)
  - 327. Base of alabaster goblet, 5.5 cm. high.
  - 328. Fragment of faience tile, 9.4 cm. long.
  - 342. Two ditto (Cairo).
  - 343. Learner's piece with o's and o's, 9.8 cm. long.

### The Coronation Hall: 1. The Entrance: a. Centre

- 35/288. Faience fragment joining 358 from South-East Courts, north end. (Pl. LXXII. 5.)
  - 335. Fragment of red jasper, 3.8 cm. long (Cairo). (Pl. LXXII. 7.)
  - 336. Small face in green glass for inlay, 2.2 cm. high (Cairo). (Pl. LXXII. 7.)
  - 337. Glass ear-stud, 2·3 cm. long. (Pl. LXXII. 7.)
  - 338. Strip of faience inlay, 1.3 cm. long (Ashmolean).

Rings bearing the name of Amenophis III, Types I. A. 1a, I. A. 1b.

Two rings with the name of Akhenaten, Type I. A. 2b.

Two rings with the name of Smenkhkarē, Type I. A. 3a.

#### b. Side Halls

No objects. (See p. 85.)

#### 2. The Main Hall

- 34/23. Six fragments of faience plaques (Manchester).
  - 24. Fragment of green leaf inlay in faience (Manchester).
  - 27. Bronze tweezers and fish-hook (Boston). (Pl. LXXII. 10.)
  - 28. Six complete faience tiles with daisy inlays. Large fragments of many more, 16.8×11 cm. (Cairo, Brussels, Brooklyn, British Museum, Ashmolean, Boston, Manchester, Otago). (Pl. LXXII. 1.)
  - 29. Faience inlays, mostly complete (Cairo). (Pl. LXXII. 2.)
  - 31. Bronze nail, 2.9 cm. long (Boston). (Pl. LXXII. 10).
  - Fragments of green leaves in faience with signs on back in ink (Cairo, Brooklyn, Winchester).
     (Pl. LXXII. 3, 4.)

#### 3. The South Rooms

34/25. Bronze adze, 20 cm. long (Cairo). (Pl. LXXII, 10.)

### 4. The Rubbish-Pits

No objects (see p. 85); for analyses of material from vases see p. 246.

Also from the Palace. Petrie (op. cit. 11 and Pl. XI)

- 1. Limestone block showing two horses feeding from a manger, c. 15 cm. high.
- 3. Fragment of limestone showing hand holding sistrum, c. 23 cm. high.
- 6. Fragment of limestone showing "swag" of pigeons, c. 25 cm. across.
- 7. Limestone block showing sleeping man, c. 21.5 cm. high (Ashmolean).
- 8. Part of ditto showing men with raised arms, c. 27.5 cm. long.
- 9. Ditto, showing servants, c. 35 cm. long.

And bronze Hes-vase presented by the Omda. Found in the cultivation near the Palace, 16 cm. high. (Pl. LXXI. 6.)

# 2. Reconstruction of the Plan, &c. (Pl. XIV).

Now that we have described the objects which were found in the various parts of the State Apartments we are in a better position to consider what they looked like when they were still standing.

The northern 150 metres, including, of course, the no doubt imposing North Entrance, has gone for ever. Since, however, the presence of plaster foundations overlaid with a sterile filling seems to have precluded to a great extent the encroachment of the cultivation, we are probably justified in believing that most of this area consisted of a big open court, containing very few, if any, structures.

(a) The Weben-Aten. This building lies right across the main axis and evidently acted as the chief entrance. The existing remains do not justify us in making any definite reconstruction. All we can say is that in all probability two great columned blocks of buildings lay on either side of the entrance. These were decorated with reliefs depicting the progress of the royal family

to worship. The columns also showed the adoration of the Aten. No fragments of either capitals or bases were found, but from the existing remains of drums they can hardly have been less than 4 metres in height. The arms which project southwards (for we assume a corresponding arm west of the main axis) are hard to explain. A theory which has no evidence in support of it, though it is not impossible, is that there were two avenues of colossal statues with a gate at the end. Such a theory, however, is a counsel of despair!

(b) The Broad Hall (Pl. XV. 2). This name probably includes the whole of the vast court entered through the Weben-Aten as well as the projected colonnade to the south. It was completely surrounded by colossal statues, those of the King in granite and sandstone, those of the Queen in sandstone only. The evidence we have shows that these statues were slightly under twice life-size, and seems to indicate that they were, along the side wings at least, seated. The oblong shape of the bases makes this probable as well as a few fragments which must certainly come from thrones. The knee from a colossus in sandstone, probably, since it is robed, of the Queen (34/171 above), is clearly that of a standing figure. It came from the south side.

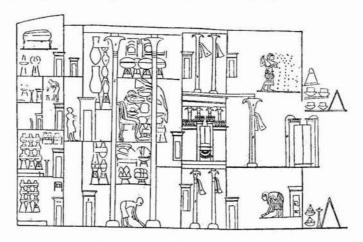


Fig. 14. Representation of the small Window of Appearance in the tomb of Meryrec I (Davies, Amarna, I, Pl. XVIII).

The presence of reliefs in the eastern approach may mean that the wall was covered with decoration. They are, however, so rare that it is probably better to assume that they drifted there from the south wall of the south side at the time when the Palace was dismantled.

Opposite the entrance to the Palace between the North and South Harems there came a break in the system. The thickening of the east wall implies the presence of small pylon towers, and the presence of column bases shows that there was some structure here. Now the tomb of Tutu (Davies, op. cit. VI, Pl. XVII) shows just inside a gateway of the Palace a balcony, or Window of Appearance, its roof supported on four columns and the parapet surmounted by a uraeus cornice (cf. above 34/227 found close by this area). It is, perhaps, not too fanciful to see in the existing remains the foundations of this Window. It should be noted that in the tomb picture a painted pavement clearly connected with the Harem is depicted near-by (see p. 42 above). A similar structure in front of an entrance to the Palace is shown in the tomb of Meryres I (Fig. 14).

<sup>&</sup>lt;sup>1</sup> The great Window shown in so many tombs will be discussed when we come to the Bridge (see below, p. 78). The present example is, we believe, a more private place of honour.

The south side, as we have shown, was originally laid out as a vast colonnade but, no doubt owing to motives of economy, the columns were confined to a central pavilion. The floor was on the same level as that of the "parade ground", but it seems clear from the discovery of sloping balustrades that the passages across it were raised. These balustrades were of alabaster and showed figures of the royal family adoring the disk. The roll-top was carved with the royal and divine names. They seem to have been 80 cm. high (Pl. LXIX. 4, 5). Whether they could be crossed by means of steps from east to west we cannot tell. Four steps on either side would be possible in the thickness of the supporting walls. Since, however, the rest of the Broad Hall was on one level, it may well have been that these causeways could only be crossed from the north or south ends.

The central pavilion was also entirely raised above the rest of the Broad Hall and the projection northwards no doubt marks the position of the stairs by which it was reached. The flanking columns were of sandstone and had capitals of the palm type shown in Petrie (op. cit., Pl. VI), though no trace of gilding was found. The inner columns were of fine crystalline limestone very lightly incised with figures of the royal family (Pl. XXXVII. 6). So superficial is this incision that it gives the impression that the columns had been covered with plaster on which the fine work was done, the existing design being merely the result of the chisel going down below the plaster. It is inconceivable, however, that such fine stone should be covered and it is probably better to assume that work on this pavilion, which is, after all, a mere addition to the general plan, was not finished before the Palace was deserted. A parallel, however, to this fine incision is found in fragments of granite which are similarly incised and also display traces of colour. The varying levels of the foundation plaster at the sides probably mean that low screen walls were built between the outer columns. Again, it is uncertain whether steps ascended to this pavilion from east and west.

- (c) The Courts south of the Broad Hall. The columns of the great colonnade entered from the pavilion were similar to those of the garden court of the Harem, save that they were on a far grander scale, and both capitals and anta caps consisted of a rendering of free foliage. The paving was evidently of alabaster and on the main axis was decorated with a relief of bound captives. The balustrades of the ramps in the Central Court were of granite. Only small fragments remained, but it would seem that the figures carved on them were on a smaller scale than those on the limestone balustrades in the Broad Hall.1 The stelae were of alabaster and showed the usual figures of the royal family adoring the disk engraved on both sides. As far as one can make out from the scanty remains they stood about a metre high. The mystery of the foundation deposits below them has already been mentioned. A curiously asymmetrical feature of the court when viewed from the east-west axis is the presence of colonnades on the north side only of the cross-ramps. These colonnades, like those which flank both the northern and the outer ramps of the side courts, consisted of inlaid columns and uraeus cornices (Pl. LXIX. 6). The latter, however, were evidently only inlaid on the side most usually seen. The ends not generally visible were merely painted, a typical piece of parsimony. The balustrades of the ramps which led from the outer courts were of purple sandstone with carving identical with that in the Central Court.
  - (d) The Bridge. The east-west axis led no doubt from the river-front to the Royal Estate.

<sup>&</sup>lt;sup>1</sup> This is natural since the Courts are at a higher level than the Broad Hall.

The Bridge over the Sikket es-Sulțân is an entirely new feature in Egyptian architecture and one well in keeping with the elaborate parade of the family life of the King. We suggest that this may have been the site of the great public Window of Appearance which is shown in practically every tomb at Amarna. It will be noticed that in nearly all the representations it is shown as having two side-doors, whether below or on a level with the Window it is hard to say. At all events the Bridge has a parallel in the North City in the great gateway flanked by false doors over which was a room as gaily decorated with frescoes as that over the Bridge. It would be a magnificent setting for the King's appearances to the population while a Window of a more normal type in the Broad Hall (see above, p. 76) was probably the scene of the more private investitures. Its internal decoration has already been described. Externally there

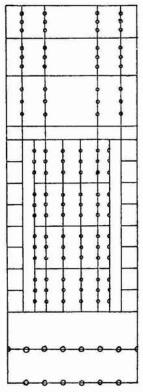


Fig. 15. Plan sketched in a quarry (Petrie, *Tell el Amarna*, Pl. XXXVII).

seems to have been some statuary but its exact position is uncertain. If we take the corresponding fragments from the gateway in the North City we should probably restore a group over each of the side-doors. [For an impression of the Bridge see Pl. II.]

(e) The Southern Section: 1. The Central Halls. The gigantic columns which supported the roof of these halls were of limestone, the shafts like bundles of reeds, the capitals like inverted bells. The flanking colonnades were similar but smaller, thus giving clerestory lighting to the central aisles. The walls of the main axis evidently showed processional scenes, but the western hall had scenes from the private life of the royal family.

It is possible that we have a preliminary plan of this section of the Palace in the sketch published by Petrie (op. cit. 19 and Pl. XXXVII) reproduced here in Fig. 15.<sup>2</sup> It was seen by Sayce in a quarry at Sheikh Said about 1885 and roughly copied. By 1892 it had been blasted away. The drawing was in yellow, about 2·30 metres long by just under 60 cm. wide. As can be seen from the illustration the main part is taken up by a central colonnade of twelve columns on each side of the main axis flanked by narrower colonnades on each side. It thus bears a remarkable resemblance to our Central Halls. Furthermore, in front of it is a colonnade which may represent that just south of the Broad Hall. The columns at the top have no parallel in the existing remains, though as we shall see there was evidently the intention of building further structures to the south.

The three cross wall-trenches at the south end of the central division are, as has already been said, extremely like the foundations for the supporting walls of ramps. These would have led up out of the hall, over the filled-in space between the stone and brick wall to some structure which had been projected but never built. This is almost certain, for as the remains exist there is no climax to which this superb series of colonnades leads. An alternative theory, however, would be that these ramps led up to royal thrones. The presence of three, however, each separated from its neighbour by two columns and the intervening aisle, renders this improbable.

JEA. XVII. 242 ff.; XVIII. 143 f.

<sup>&</sup>lt;sup>2</sup> [See, however, the revised drawing of this sketch published by Davies, "An Architectural Sketch at Sheikh Said", in *Ancient Egypt*, 1917, pp. 21-5. It is not certain that the plan is of a building at Amarna, and it does not conform exactly with the plan of any building in the Central City.]

The doors which connected the halls have been placed in accordance with the foundations, and the presence of great blocks of sandstone carved on either side with a figure of the King as a sphinx offering cartouches to the disk (Pl. XLI. 2, 3). These evidently served as the "broken lintels" or heavy overhanging anta caps of the doors.

2. The Rooms flanking the Central Halls. As has already been said, we have no evidence as to how these were entered. It is a curious fact also that though the eastern group is extremely well preserved, the floor-levels and the edges of the floor-plaster being frequently as sharply defined as when they were laid, no trace of a column was found, and practically all the stonework both of foundations and of walls had been taken. In the western group one fragment of a limestone column was found (see above, 36/40; Pl. LXIX. 8), the scene on which is almost inexplicable, what appears to be a gigantic finger pressing a dead calf into a receptacle shaped like a cocked hat!

The two southern rooms are easy to reconstruct with four columns in each.

The central area was clearly surrounded by a colonnade, between which and the wall was a floor at the usual height, i.e. about 2 metres above the foundation plaster. Within the colonnade is the great concrete platform which lies about 1.60 metres below the floor-level. The marks of the paving blocks, where they can be traced on this, afford no help since they run evenly over the surface. We suggest that steps led down to it on every side, whether extending right across the whole length, only in the middle of each side, or at each end of each side, probably the latter. Allowing a normal height of 20 cm. for each tread, we need eight steps, and since we must allow a landing at the bottom and a tread, for so important a structure, of not less than 50 cm., it seems best to believe that the steps began to descend actually between the columns.

What the great concrete platform supported we do not know. It is possible that statues of considerable size rested on it. The toe of a sandstone colossus (see above, 35/450) was found here. Nor do we know what existed in the middle. Probably a few steps ran down to the centre and we should like to believe in an artificial pool or even a fountain here, though no trace remains.

To the north we can distinguish one room with two columns, but the remains in the north-west corner are too confusing to allow of more than a very tentative suggestion of a chamber with four columns and two narrow rooms opening off it to east and west. The existence of blockmarks in the plaster at the lowest level, however, implies something more elaborate.<sup>1</sup>

3. The South-East Court. The main feature of this court was the pair of pavilions, one of which was never begun, save for the foundation plaster, the other never finished. The wings to the northern pavilion may have been themselves side chambers as has been suggested above or they may have given access to the two small spaces at the back, or they may even have acted as the retaining walls of ramps leading up to the courts to the north. This latter, however, is unlikely since there are no corresponding ramps to the north of the wall. The vine-leaf columns have already been described.

It was no doubt the fact that the court was on a lower level than those to north and west

<sup>&</sup>lt;sup>1</sup> [It will be noticed that Mr. Pendlebury's reconstruction here differs from Mr. Lavers's restored plan of the same area in Pl. XIV. The plan of the existing remains (Pl. XIII C) certainly supports Mr. Pendlebury and it seems most unlikely that the north and south sides of this area were similar in plan. H. W. F.]

that caused the mistake in the original layout as a result of which steps had to be built to reach the main ramp northwards. It may, of course, have been that, as we know this section was not completed, the level of the court had not been raised throughout to its proper height and these steps laid temporarily for the convenience of the builders would have been removed or covered up. The sunk pathways rather give one the impression that the court had been a garden at some time.

- (f) The South Court. This needs no further description. If we are right, it was intended to be the site of some structure of culminating magnificence to which the ramps at the south end of the Central Halls gave access.
- (g) The Coronation Hall. It has been pointed out that this is a later addition to the Palace. It shows signs of hasty work, though its magnificence is attested by the faience plaques and inlays (see above, 34/28, 29, 50; Pl. LXXII. 1–4) which must have lined its walls. The absence of any sign of roofing in the central room at the south end implies, as has been said, that it was open to the sky. The depression in it indicates the presence of some heavy object. We know the fondness of Akhenaten for hypaethral ceremonies and this, taken in conjunction with the ad hoc nature of the whole building and the presence of Smenkhkarēc's name on some of the bricks, makes it a justifiable theory that this Hall was built for some ceremony connected with his co-option about the fifteenth year of Akhenaten's reign.

### Conclusion

This, then, was the Palace, the largest secular building in the ancient world, and the only one in Egypt to be constructed of stone. It has a magnificent design and, had the original scheme been carried through, it would have needed to fear no rival in splendour. The plan is something as new to Egyptian architecture as that of the Temple. Whence came the idea we cannot say. Certainly each separate unit is native to Egypt with the exception of the ascending and descending ramps in the Courts south of the Broad Hall where the main north—south axis is crossed by that from east to west. These ramps would seem more at home in Mesopotamia and we must not forget the possible influence of that region through the followers of the Babylonian and Mitannian princesses who came to the court of Amenophis III.

### II. BUILDINGS DEPENDENT ON THE PALACE

1. The Sculptors' Area. Just north of the north end of the Palace the cultivation recedes, apparently owing to the presence of quantities of stone chips which lie near the surface. The walls were much broken and do not make any intelligible plan. It is apparently part of the same area as that labelled "Ushabtis" by Petrie (op. cit. 17, 30, and Pl. XXXV) which is now beneath the cultivation. This contains a number of trial-pieces, unfinished shawabtis, and the so-called death-mask of Akhenaten. The ground was covered with granite dust.

A very large bay in the cultivation to the north of this area was apparently caused by some freak of the wind which has piled here the drift-sand in what appear at first sight to be artificial mounds but which contained no trace of building.

Between this and the Great Temple is a rectangular building of Roman date not excavated.

#### OBJECTS

- 35/558. Upper part of unfinished shawabti in limestone, 17 cm. high (Brooklyn), (Pl. LXIII. 2.)
  - 559. Fragment of purple sandstone not unlike head of shawabti, 7.2 cm. high. (Pl. LXIII. 2.)
  - 560. Statuette of monkey in limestone roughly blocked out, 5.8 cm. high (Brooklyn). (Pl. LXIII. 3.)
  - 562. Pesh-en-kef in black granite, 12 cm. long (Ashmolean). (Pl. LXIII. 2.)
  - 563. Head of the Queen in limestone roughly blocked out from unfinished group, 5.5 cm. high (Ashmolean).
  - 564. Much broken head of the Queen in limestone, unfinished, c. 22 cm. high.
  - 565. Unfinished limestone head of the King. Ink lines still visible in places, 27 cm. high (Cairo). (Pl. LXIV. 1, 2.)
  - 566. Fragments of two wigs from limestone statuettes:? shawabtis.
  - 567. Unfinished group of monkeys in a chariot, 10 cm. long (Cairo). (Cf. finished example C. of A. II, Pl. XXXI). (Pl. LXIII. 3.)
  - 568. Sketch of an ape in ink on alabaster, 12.8 cm. high. .
  - 569. Fragment of hand of Aten ray in sandstone for inlay, 5 cm. long.
  - 570. Hands holding offering-table and one forearm from \(^3\) life-size statue of the King in fine lime-stone. The offering-table is inscribed with the names of the Aten (late form), Amenophis III, and Akhenaten, 34 cm. across (Cairo). (Pl. LXIV. 4-6; Fig. 22.)
  - 571. Bronze rod, 19·1 cm. long.
  - 572. Fragment of faience plaque, 5 cm. high (Cairo).
  - 573. Plumb-bob in limestone, 3.6 cm. high.
  - 575. Part of frieze of uraei in limestone. The disks above the heads are between horns, 7 cm. high (Cairo).

### Also found by Petrie (op. cit.):

Death mask in plaster, one side of face only in good condition. ? Akhenaten. (Pl. LXIV. 3.)

Unfinished *shawabtis* in black and red granite and crystalline limestone (one on Pl. LXIII. 1; cf. Pl. CV. 12. Pink granite, 21 cm. high).

Fragments of statues.

Trial pieces showing an arm, a foot, and corrected hieroglyphs.

Fragments of faience.

### From the larger bay to the north:

35/574. Faience knob from a box, 9.7 cm. diameter.

2. The Buildings south-west of the Palace (Pls. XIII C; XLIV. 3, 4). O. 42. 1 and 2. These lie by the south-west corner of the Coronation Hall with which 2 is connected by means of two walls. O. 42. 1 is a pavilion, probably not unlike that at the west entrance to the Great Temple (pp. 14, 16). The concrete foundations show that there was a row of columns along the south (entrance) side. Next comes a forehall flanked on one side by magazines, on the other by a columned room. The main hall has two rows of columns and side chambers open off it (Pl. XLIV. 3).

Owing to the configuration of the ground the foundations step down as they go northwards, but this does not necessarily imply any changes of floor-level. Just to the north of the central area are the remains of a Roman brick-kiln.

O. 42. 2 is also entered from the south. Here, too, was a colonnade and the buildings of mud brick behind were screened off by walls projecting east and west from it (Pl. XLIV. 4). To the north lies an open court surrounded by brick-paved rooms. In one of those to the east was found a late, Roman, burial in a pottery coffin elaborately decorated.

At intervals towards the north end of both these buildings can be distinguished an earlier system with well-built brick walls and stone thresholds.

Clearly both these structures were intended to be part of an elaborate entrance system to some building now lost under the cultivation. Perhaps there was some access to the south-west part of the Palace from a secondary quay on the river. Obviously they were both important and built early in the period, for it is owing to their presence that the Coronation Hall is not on the main axis.

### OBJECTS

- O. 42. 1. 34/1. Bronze chisel, 24 cm. long (Ashmolean). (Pl. LXXII. 10.)
  - 2. Lower corner of faience brick, 5 cm. long (East Anglia).
  - 4. Three heads of uraei in limestone, 10 cm. long (Cairo).
  - 8. Faience vase-handle, 6.6 cm. long (Cairo).
  - 9. Uraeus head in faience, 5·1 cm. long (Otago).
  - 10. Disks from uraeus cornice of limestone. Background of blue faience, 8.5 cm. high (Cairo).
  - 11. Part of limestone relief showing legs, 11.2 cm. high.
  - 13. Fragment of faience tile, 4.9 cm. high.
  - 14. Part of limestone block with neck and shoulders of princess on one side and belly on the other, 23 cm. long.
  - 15. Glass globe, probably Arab.

Faience ring of Akhenaten, Type I. A. 2g.

- O. 42. 2. 34/3. Seven fragments of faience tiles like 34/28 from the Coronation Hall (Cairo).
  - 5 and 26. Part of head from limestone relief, 14 cm. high. (Pl. LXXI. 11.)
  - Three fragments of faience tiles (Cairo and Museum of Archaeology and Ethnology, Cambridge).

  - 17. Limestone uraeus head, 8.5 cm. long.
  - 18. Three fragments of relief in limestone showing parts of figures of servants (Winchester).
  - 19. Fragments of two faience bricks (San Diego and Glasgow).
  - 20. Fragment of faience tile (Glasgow).
  - 21. Fragment of faience inlay for bottom of cartouche (Cairo).
  - 22. Fragments of Roman pottery coffin with human, horned head (Cairo). (Pl. LXXI. 12.) Faience pendant, cartouche of the Aten (early) Type IV. E. 5.

### SUMMARY OF UNIMPORTANT OBJECTS FROM THE PALACE

### A. THE PRIVATE QUARTERS

- 1. The Servants' Quarters
  - 36/44. Fragment of kohl tube in faience. 87. Fragment of black granite bowl, 19 cm. deep. 93. Lump of limestone. Rings I. B. 1, I. B. 4, I. C. 5 (6), I. D. 28. Scarab II. D. 1. Pendant IV. B. 18, IV. C. 7 (2), IV. C. 8 (2), IV. C. 13a, IV. C. 13c, IV. C. 13d, IV. C. 19 (2), IV. D. 3, IV. D. 10. Moulds 558, 572, 589. Inlays 460, 484. Beads IV, VIII (2), IX, X, XIX (3), XXII (over 100 all found together), XXIV (6), XXV (3), XXVIIIa, XXXII (3), XLI (2), XLIII (3), XLIX, LV, LVI. Two hair-rings. Several glass rods. One fragment of variegated glass. Some gold leaf. Pottery, I. 15, III. 5 (several), III. 8, IV. 4, VI. 4 (7), VII. 1, IX. 7, XI. 7, XII. 3, XIII. 5, XIV. 2, XIV. 8, XV. 1, XV. 7 (2), XV. 23 (5), XVI. 1 (4), XVI. 5, XVIII. 12, XVIIII. 3.
- 2. The Harem Quarter: The North Harem
  - 34/ Pendants IV. A. 2, IV. B. 6, IV. C. 8, IV. C. 13c, IV. D. 10. Mould 448. Inlays 458 (2), 459 (3,

one bent for a corner), 481, 482, 507, 516, 517 (5). Beads XIV, XXII, XXIV (3), XXIX, XLIII. Many broken fragments of faience. One fragment of Samian ware.

## The Area of the entrances from the Sikket es-Sultan

34/-. Ring I. C. 5. Pendant IV. B. 6, IV. C. 1a, IV. C. 11. Inlays 458 (2), 481, 482, 516. Beads VIII, XIX, XXXII (2). Fragments of gold leaf.

#### The South Harem

35/-. Rings I. B. 4, I. B. 7, I. C. 5 (several). Scarab II. C. 3. Pendants IV. C. 3, IV. C. 7, IV. C. 11, IV. D. 10, Inlays 587, 591, 600. Beads VIII, XVI, XIX, XXII (2), XXIV (2), XXVIII, XXIX, XXXII. Pottery III. 3, XVI. 1.

### 3. The Magazines, &c.

35/126. Two fragments of bronze. 142. Fragment of green faience vase. 143. Ditto. 144. Bag of yellow paint. 148. Fragment of white faience with blue lines. 151. Fragment of faience plaque. 152. Sandstone fragment of wig (?). 157. Ditto. 167. Fragment of wig in blue faience. 168. Fragment of relief in black granite. 181. Fragment of faience. 211. Ditto. 212. Ditto. 223. Ditto. 224. Ditto. 225. Ditto. 226. Ditto. 240. Fragment of incised limestone. 246. Fragment of granite mould. 251. Fragment of faience. 252. Fragment of alabaster (Pl. LXXI. 1). 257. Two fragments of faience wigs. 258. One ditto (Cairo). 278. Alabaster roundel (Pl. LXXI. 1). 283. Fragment of faience. Rings I. B. 2, I. B. 4 (2), I. B. 11, I. B. 13, I. B. 18, I. B. 28, I. C. 5 (many), I. C. 13, I. C. 20, I. C. 25, I. C. 27. Scarab II. C. 11. Pendants IV. B. 16, IV. B. 18, IV. B. 20, IV. C. 3, IV. C. 4, IV. C. 5, IV. C. 7 (7), IV. C. 8 (3), IV. C. 11 (8). IV. C. 12a, IV. C. 13a (3), IV. C. 15 (2), IV. C. 18, IV. C. 19 (2), IV. C. 20 (3), IV. C. 56. Moulds IV. C. 13b, IV. C. 15, XXXXVI. Inlays 267 (2), 456, 458 (3), 465 (2), 484, 512, 587 (4), 590 (2), 591 (6), 592, 593, 601. Beads VI (7), VII (2), IX (3), XIV (8), XVI (2), XVII (2), XIX (many), XXII (many), XXIV (many), XXXX, XXXII (many), XXXV, XLI (3), LXIV (2). Pottery XI. 1, XIV. 12, XV. 6, XVI. 1 (several). Also fragments of faience and variegated glass.

#### B. THE STATE APARTMENTS

#### a. Weben-Aten

34/49. Flint. 71. Fragment of ribbed faience, 77. Fragment of faience tile. 180. Group of monkeys in limestone. 236. Fragments of ribbed faience. Beads XXIV, XXXII.

#### Southern extension

35/8. Part of limestone stool. 10. Three fragments of bronze. 11. Flint blade. 19. Two sandstone polishers. 26. Black granite object. 27. Limestone fragment with foot scratched on it. 28. Ditto. 29. Fragment of quartzite. 31. Fragment of incised limestone. 32. Stud with part of ink-drawing (Pl. LXXIV. 2). 33. Limestone learner's piece. Ring I. B. 2. Inlays 561 (many), 587 (many), 591 (many), 594 (many), 600 (3). Pottery Pl. CXII, J. K.

#### b. The Broad Hall: 1. from south end to beginning of central pavilion

34/85. Fragment of incised alabaster. 145. Fragment of wig in faience. 161. Fragment of sandstone relief. Rings I. C. 5 (2). Scarab II. C. 4. Pendants IV. C. 7, IV. C. 11, IV. C. 18, IV. D. 2. Inlays 447, 458 (2), 460, 482, 516 (2), 584 (2), 585, 587 (4), 591 (4). Beads VII, XXII, XXIV, XXV, XXVIIIa, XXIX, XXXI, XXXII.

# 2. From the central pavilion westwards

35/39. Fragment of faience. 61. Fragment of granite. 62. Fragment of limestone inlay. 71. Fragment of faience. 95. Ditto. 106. Limestone uraeus head. 107. Flint blade. 114. Relief of heads in limestone. 115. Sandstone block. 116. Faience fragment. 118. Limestone roundel. 119. Faience fragment. 121. Sandstone fragment. 122. Limestone fragment. 123. Granite wig. 131. Fragment of stone

vessel. 135. Flint blade. 209. Faience fragment. 218. Ditto. 256. Limestone object. 270. Two fragments of faience. 282. One ditto. 296. Inscribed limestone. 297. Ditto. Rings I. B. 3. Pendants IV. C. 8, IV. C. 11 (2). Inlays 262, 267, 269, 481, 489, 565 (2), 569 (3), 583, 587 (3), 588, 590, 591 (4). Beads VIII, XXII, XXIV, XLI.

#### c. The Courts south of the Broad Hall: East end

35/41. Faience fragments. 56. Ditto. 74. Uraeus head in sandstone. 76. Quartzite block.

#### West end

35/402. Faience fragments. 413. Two fragments of faience plaques with Aten names. 429. Two faience fragments. 445. Faience fragment. 478. Ditto. Rings I. B. 4 (2), I. C. 5 (4), I. C. 13. Pendants IV. B. 13, IV. C. 7, IV. C. 19. Inlays 457, 458, 481, 565 (4), 569, 571, 587 (4), 591 (2), 600. Beads VIII (3), XVIII, XIX (4), XXII (many), XXXII (2), LII.

# d. The Bridge. The approach from the west

Rings I. C. 5 (2). Pendants IV. C. 6, IV. C. 18, IV. D. 10. Inlays 447, 515, 565 (6), 587 (3), 592, 600, 601 (2). Beads VI, CIX. Fragments of variegated glass.

#### The Bridge proper

35/372. Two potsherds with designs. 374. Design in ink on limestone. 375. Ditto on potsherd. 376. Ditto. 377. Ditto. Pendants IV. C. 7, IV. C. 11, IV. C. 19. Mould of ring. Inlays 458, 588 (2). Beads V, VI, VIII, XVIII, XIX, XXI, XXII (many), XXIV (3), XXXII (many), XLI.

For objects from the part of the bridge and its approach in the garden of the Royal Estate see below, pp. 88, 89.

#### e. The Southern Section: 1. The Central Halls

35/502-4. Faience fragments. 528. Ditto. 534. Limestone base. 555. Fragment of purple sandstone. Rings I. C. 5 (several), I. C. 26. Pendants IV. B. 20, IV. C. 7, IV. C. 11 (2), IV. C. 12a, IV. C. 13a (2), IV. C. 19 (2). Moulds, ring, I. B. 1, IV. C. 7. Inlays 267, 587 (4), 588 (2), 591 (6), 603. Beads VIII (5), XVI, XVIII, XIX (3), XXII (3), XXIV (5), XXVI, XXIX, XXXI, XLI, XLVII, LI (3), LXVI, LXX (3). Pottery III. 3, III. 7, IX. 2, XIV. 3, XIV. 4 (many filled with plaster), XVI. 1 (3).

36/- (i.e. west of main axis). Ring I. B. 5. Pendant IV. B. 20. Inlay 569. Beads VI, XIX.

### 2. Rooms flanking the Central Halls:

a. West

None.

### b. East

35/431. Object of red jasper (Pl. LXXII. 7). 432. Part of pottery figurine of woman. 433 Two faience fragments. Rings I. B. 2, I. B. 29, I. B. 30, I. C. 5 (7). Pendants IV. C. 3 (3), IV. C. 7. Inlays 456, 512.

# 3. The South-east Courts: a. South

Limestone fragment. 292. Faience fragment. 293. Ditto. 303. Limestone ditto. Rings I. C. 13, I. C. 27. Udat eye III. A. Pendants IV. B. 13, IV. C. 1a, IV. C. 4, IV. C. 11 (2), IV. C. 19 (3). Inlays 267 (2), 457, 458, 459, 512 (2), 565, 572, 587 (4), 589 (4), 591 (many). Beads VI, XIV, XIX, XXII, XXIV, XXXII (many), XXXVI, XLI, LI.

#### b. Centre

35/313. Fragment of alabaster. Rings I. B. 2, I. B. 4 (3), I. C. 5 (many), I. C. 27. Pendants IV. C. 1a (2), IV. C. 5, IV. C. 8, IV. C. 11 (4), IV. C. 55, IV. D. 3. Inlays 267 (3), 509, 538, 560 (2), 563, 565,

584 (4), 587 (many), 588 (many), 591 (many), 601, 606, 607, 608. Beads I, VIII, IX, XVI, XIX, XXI, XXII (many), XXXII (many), XLI.

#### c. North

Rings I. B. 2, I. B. 4, I. C. 5 (several), I. C. 27 (2). Pendants IV. A. 6, IV. B. 18, IV. C. 3, IV. C. 8, IV. C. 11, IV. C. 13a, IV. C. 24, IV. C. 55, IV. D. 9. Inlays 456, 460, 461, 565 (4), 587 (6), 588 (5), 591 (many), 604, 605, 606, and many fragments. Beads VIII (2), X, XIV, XXII (many), XXIV (8), XXVIIIa, XXIX, XXXII (6), XLI, XLIII (2). Pottery XV. 4 (two filled with plaster). Also fragments of variegated glass and gold leaf.

### f. The South Court

35/294. Fragment of granite bowl. 329. Fragment of faience bowl. Rings I. B. 4, I. C. 5 (many). Pendants IV. C. 7, IV. C. 11, IV. C. 15. Inlays 458, 481. Beads XV, XVI, XIX, XXIV, XXVIII.

g. The Coronation Hall: 1. The Entrance: a. The Centre

Rings I. B. 1, I. C. 5 (many), I. C. 7, I. C. 10, I. D. 5, I. D. 11, I. D. 13. Pendants IV. C. 4, IV. C. 7, IV. C. 8, IV. C. 11, IV. C. 19. Inlays 457, 458, 584 (2), 587, 595. Beads VI, XII, XIV (3), XXII (2), XXIV (8), XXXII (many), XXXIII, LI. Pottery XVI. 1 (several), XVII. 17 (2).

### b. Side Halls

No important objects. Rings I. B. 4, I. C. 5 (2), Pendants IV. A. 1, IV. C. 4, IV. C. 7, IV. C. 11, IV. C. 13a (2), IV. C. 18. Beads XVIII, XIX, XXII (6), XXIV (2), XXXVI. Pottery V. 3.

#### 2. The Main Hall

34/-. Rings I. B. 1, I. B. 3, I. B. 8, I. B. 11, I. C. 2, I. C. 5 (many), I. C. 10. Scarab II. D. 1. Udat eye III. A. Pendants IV. A. 11, IV. C. 1a, IV. C. 3 (2), IV. C. 8, IV. C. 11 (4), IV. C. 13, IV. C. 19, IV. C. 27. Moulds, ring IV. C. 6. Inlays 484, 595 (2). Beads II, III, V, VI (2), VIII, X (2), XIV, XVIII, XIX (4), XXI, XXII, XXIV (7), XXV, XXVIII, XXIX, XXXI (2), XXXII (3), XXXIV, LIX, LXVIII. Pottery XIII. 2 (3, 2 painted), XV. 6 (many painted).

### 3. The South Rooms

Nothing.

### 4. The Rubbish-Pits

Pottery XV. 6 (many).

SUMMARY OF UNIMPORTANT OBJECTS FROM THE DEPENDENCIES OF THE PALACE

- The Sculptors' Area, &c.

Nothing.

- O. 42. 1.34/12. Fragment of limestone with traces of lotus pattern in blue paint. 16 fragments of pottery uraeus. Pendants IV. B. 14, IV. D. 6.
- O. 42. 2. 34/-. Rings I. B. 11, I. C. 5. Scarab II. C. 11. Udat eyes III. A. 1, III. B. 5. Pendants IV. C. 5, IV. C. 11. Beads XIX (4), XXIV, XXVIIIa, XXXI, XXXII, XLIII. Mould, ring. Fragments of faience, alabaster, and variegated glass. Gold leaf.

### CHAPTER V

### THE ROYAL ESTATE

This great estate consists of the King's House (P. 42. 1 = Petrie's House 13) with its garden where lies the other end of the Bridge connecting the Royal Estate with the Palace (see above, p. 56), the Royal Magazines (P. 42. 2 = Petrie's No. 17), Ḥat-Aten proper, the Small Temple or Chapel Royal, and the Priests' Quarters (P. 43. 1 and 2) (Pls. XVI; XLV. 1, 2). All these buildings, with the exception of P. 43. 2, have at stamped on their bricks [Pl. LXXXIII, VIII- and p. 150 below].

The belief that this enclave of buildings was the private residence of the King is confirmed not only by its great size but also by its intimate connexion with the Palace and by the occurrence of wall paintings which show scenes from the private life of the royal family and others containing human figures which are very seldom found in the houses of ordinary individuals and then only on a "niche" or false door.

# 1. The Garden (Pl. XLVI. 1, 2)

This is entered from the north. A ramp leads up to the gateway which is flanked by pylon towers. There are traces of flower-beds and trees outside as well as what may be a small sentrybox. The irrigation channels of the garden are clearly discernible as well as the tree-pits. A well was sunk near the west side. The whole garden is covered with a thick layer of plaster and chips of stone. Whether this means that it was the scene of the destruction of the decoration of some building or whether, as we should prefer to think, plaster rendering was laid to encourage the growth of flowers as in the most modern forms of gardening, we cannot say. At the north end of the east wall a narrow door leads into the Magazines (P. 42. 2). At the south-east corner a door which still retains its stone threshold leads southwards into the long court east of the King's House (P. 42. 1). At the north end of the west side are two terraces at a lower level. The stairs from the highest are missing, but a small flight leads down to the lowest where there was evidently an arbour, the roof supported on square brick piers at the north end. At the south end are four long narrow rooms brick-paved and with stone thresholds built up against the north wall of the Bridge and fronted by a veranda (Pl. XLVI. 1). The east wall of this terrace originally ran right through and lined up with the west wall of the King's House. At a later date it was crossed by the Bridge. It is quite possible that the whole of this lowest terrace is a later addition contemporary with the latter structure.

The Bridge was entered from the highest terrace of the garden, a mud paving being laid on a ramp of sand and chips which itself overlies an earlier brick paving and some whitewashed structure. The thickening of the walls as the pressure from this filling increased should be noted. Along the south wall of the Bridge a flight of brick steps leads up to a small guardroom (Pl. XLVI. 2), but the main entrance from the Sikket es-Sulţân was by a steep ramp leading to a big gateway. From the first courtyard so entered access was obtained to a series of brick storerooms or sentry-boxes on the north side and to the King's House on the south. A gap in the

wall led to the main garden in the south-west corner of which was another small entrance to the King's House.

# 2. The King's House (P. 42. 1: Pl. XLVI. 3, 4; Petrie, op. cit. 23)

This building is divided into several distinct sections. That to the west is entered from the first courtyard and consists of an L-shaped block of buildings which seem to be in the nature of servants' quarters. There are two distinct sets of rooms just inside the west wall, two sets, smaller but provided with columns, in the main block on the opposite side of the court, while in the projection eastwards of this section is a group which, though not conforming to the normal house plan, is yet near enough to it to be considered as a separate entity. It consists of an entrance-hall and a main living-room with more private rooms on either side. The roof was reached by a staircase leading up from a south court, the entrance to which is not clear.

Connected with this latter group of rooms is a courtyard to the east, also entered by a door in the south wall and having a flight of stairs in the north-east corner leading up to the roof of the most important block described below. The south side of this court is occupied by a small block of buildings along the south and west sides of which run corridors. At the west end of the block are two sets of three bedrooms, the niche at the back in which the bed itself was set being remarkably shallow, only 1 metre. To the east the building is divided into two, the northern half consisting of a room with two closets opening off it, the southern half of a room within the main room. The mud floor and what was left of the mud-plastered walls of this small room were covered with streaks of paint, yellow, red, blue, green, black, where people had wiped their brushes. Indeed, the very brushes and other paraphernalia of painting were found here (see below, 31/492; Pl. LXXVI. 5). It is hard to resist the conclusion that these were the quarters of the six princesses with their night-nurseries and their playroom.

The most important block in the whole building lies to the north-east. It is approached by a door from the garden which leads via a corridor and a lobby, off which opens a long room or courtyard, into an inner court on the south side of which are storerooms containing brick supports for shelves. South of these are three other rooms in which are small L-shaped screen walls. They look not unlike bathrooms. The centre of this block consists of a great square hall, its roof supported on seven rows of six columns. To the south of this is another hall with two rows of six columns. Even the bases of these columns had disappeared as well as most of the brick floor. It would appear from the holes that the bases were about 1 metre in diameter. The shafts of the columns were clearly of wood, for had they been of stone it is practically certain that a few chips would have been found. The walls of the main room had a dado showing alternating clumps of lotus and papyrus between panels of the usual type (Pl. XLVI. 3). Above this had been painted figures. A similar dado occurs in all the rooms of this section. The southern hall boasted a ceiling painted with water-fowl on a yellow background.

The north-east corner of the house is occupied by a large room at the north end of which are the remains of an altar, probably not unlike that of Panehsy (see above, p. 26). The base is of mud brick. The supporting walls of the ramp or steps have a whitewashed roll-top, a white band along the base and, as far as we could make out, some fresco showing kneeling figures (Pl. XLVI. 4). On the east side of the room are four storerooms with brick supports for shelves.

The south-east corner of the house is accessible only from a corridor which leads out from the main room. It consists of two main rooms, there being two L-shaped screen walls within the door of each. Petrie (op. cit. 23) thought they might be supports for heavy ventilators of wood on the roof for which the ordinary beams would not suffice. We suggest, however, that they were merely screens and the central opening was probably covered with a curtain. The western of the two main rooms is divided into two small closets at the south end, in both of which are screen walls. A bath slab of stone with a stone basin to catch the water survives in one. Probably a latrine seat was in the other. In the eastern room there is an inner chamber at the south end. It was in the antechamber to this inner room that the famous fresco of the princesses was found by Petrie (op. cit. 15). Many fragments belonging to this or to a similar scene were found by us among the debris. Most important were a fragment showing the front of the Queen's face and several pieces showing columns, with palm-leaf capitals. We suggest that this little suite of rooms formed the bedroom, bathroom, and latrine of the King himself.

Petrie (op. cit. 15) mentions other fresco fragments consisting of the legs of an Asiatic and a Negro captive kneeling with a bowl on a stand between them, legs of other figures, a flight of stairs, ornamented coffers, and groups of faces. The first mentioned is probably that which still adorns the outside of the north wall of the house immediately behind the altar. It is the only elaborate piece of painting known to have been in so exposed a position (cf. p. 38 above).

Along the east side of the house runs a large court from which the Magazines (P. 42. 2, see below) were entered. There is also a large door with a small gatekeeper's lodge just within, which lies immediately opposite the side entrance to the second court of the Small Temple (see below).

#### **OBJECTS**

#### The Garden

- 31/570. Sculptor's trial piece in limestone showing the King's head, 13 cm. high (Copenhagen). (Pl. LXXIV. 6.)
  - 580. Fragment of faience inlay, 1.7 cm. long.
  - 583. Thighs and upper part of legs of limestone statuette of the King, 15 cm. high (Ashmolean). (Perhaps from the same statuette as the foot 31/582 from P. 42. 2, see below, p. 92.)
  - 584. Part of hand of half life-size statue in sandstone, 6.5 cm. across (Wellcome).
  - 595. Two bronze fish-hooks tied together with thread, 3.3 cm. long (Glasgow and Wellcome).
  - 596. Sculptor's trial piece in limestone showing face and hieroglyphs, 11.3 cm. high (New York).
  - 612. Part of sandstone dish, 23 cm. diameter.

#### The Bridge

- 31/613. Wooden kohl stick, 10·3 cm. long.
  - 614. Fragment of faience plaque, 4.6 cm. high (Wellcome).
  - 615. Ditto, 3.3 cm. long (Wellcome).
  - 616. Alabaster roundel, 3 cm. in diameter.
  - 617. Sherd showing plans of buildings in black ink, 15.5 cm. long (Cairo).
  - 618. Fragment of faience plaque, 7.9 cm. long (Cairo).
  - 619. Flint knife, 6.7 cm. long.
  - 620. Wooden knob of box, 3.9 cm. in diameter.
  - 621. Sculptor's trial piece in limestone showing a princess roughly blocked out, 10·2 cm. high (Glasgow).
  - 622. Sherd of Late Helladic IIIa amphora, 5.6 cm. high (Ashmolean).

<sup>&</sup>lt;sup>1</sup> Published in considerably more detail by N. de G. Davies, *JEA*. VII. 1. ff. This and the fragments recovered by us are in the Ashmolean Museum, Oxford.

## In the filling below the ramp of the Bridge

- 35/468. Sherd with plan in ink drawn on it, 8.5 cm. high (Ashmolean). (Pl. LXXIV. 2.)
  - 469. Fragment of pottery showing voluted capital of column in relief, 10 cm. high (Cairo). (Pl. LXXIV. 2.)
  - 470. Bone weaving tool, 11.5 cm. long (Manchester).
  - 471. Wooden door-bolt, 9.3 cm. long. (Pl. CIX. 3.)
  - 473. Fragment of impression of the King's cartouche in plaster, 7.5 cm. high.
  - 474. Sculptor's trial piece in limestone showing human face on each side, 20 cm. high (Brooklyn). (Pl. LXX. 5.)
  - 475. Sherd with sketch in ink of a man with a tail, 11.6 cm. long. (Pl. LXXIV. 2.)

#### The House

- 31/483. Glass ring, 3 cm. diameter (Wellcome).
  - 484. Fragment of variegated glass vase, 3.2 cm. high.
  - 485. Rim of faience bottle, 1.6 cm. diameter.
  - 492. Two paint brushes of fibre (11 and 8 cm. long). Three fish-bone pens, lumps of red, yellow, and blue paint. From the south-east part of the house (Cairo). (Pl. LXXVI. 5.)
  - 515. Fragments of cartonnage from facing of cavetto, painted alternately red and green on yellow.
  - 516. Bronze tool, 8.3 cm. long.
  - 530. Fragment, perhaps of foot, from a statue of crystalline limestone, 8·3 cm. long (Wellcome).
  - 531. Fragment of limestone bracelet with the names of the Aten (early), Akhenaten and Nefertiti, 5 cm. long (Wellcome).
  - 562. Alabaster disk, 3 cm. diameter (Wellcome).
  - 567. Fragment of faience plaque, 3.7 cm. long (Cairo).
  - 568. Pottery cup, 5·1 cm. high.
- 35/467. Statuette of monkey in limestone, 6.2 cm. high.

Petrie (op. cit. 23) expressly states that he found no objects in the house.

# 3. The Royal Magazines (P. 42. 2; Petrie, op. cit. 23)

There are four entrances to this block. One in the main south wall, one by means of a corridor which runs right along the south end from the court east of the King's House, one from the north end of the same court on the stone threshold of which a panel of a wooden door bearing the late cartouche of the Aten was stuck with plaster (see below, 31/590), and one from the garden. There seems to have been some earlier structure, the foundations of which can be seen below the present remains. The position of these as well as of the holes for the column bases (c. 70 cm. to the west and 40 cm. to the east) is shown in dotted lines on the plan. The brick paving of this earlier structure has often been utilized for the floor of the later which has otherwise almost completely disappeared. A long broad alley-way leads from the central entrance on the west side to the court which runs the whole length of the east side. This is divided into two by a doorway just south of the east—west alley. At its south end is the door through the main wall of the block and within are a few rooms, in one of which was found a stone slab with nine hollows which had been used as part of a fire-place.

On either side of the southern court are thirteen magazines, and a narrow staircase at the south end. At intervals on the west side are traces of a veranda in front. In the eighth magazine from the south on the west side is a plaster floor at the west end. By the north wall is a stone threshold belonging to the earlier system. In the fourth magazine on the east side two broad

plaster floors run across. In the north-west corner was a late, Roman, burial in a wooden coffin covered with plaster (see below, 31/578, 585).

At the south end of the northern court are numerous pits for trees. At the north end there are traces of mud paving surrounding a deep depression nearly 25 metres in diameter, the collapse of whose sides has carried with it the near ends of the northern magazines. We have suggested on the plan that this may originally have been lined in some way and have acted as a pond; equally probably, however, it was merely where the sand for architectural purposes

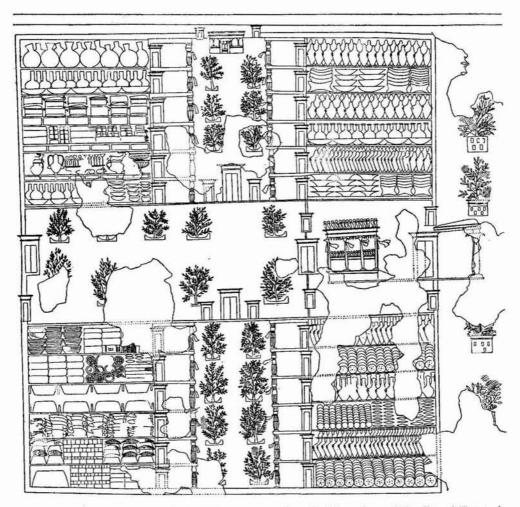


Fig. 16. Representation of a building representing the Magazines of the Royal Estate in the tomb of Meryre I (Davies, Amarna, I, Pl. XXXI).

was obtained. In a pit in the north-east corner of the court the alabaster vase of Ḥatshepsut was found (31/600; see below and Pl. LXXIV. 8) and in a similar pit just south of the pond was found the wooden coffinette containing ivory castanets (31/591-2; see below, p. 92 and Pl. LXXIV. 9, 10; see also Pl. CIV and p. 188 below). In the north-west corner are a few broken walls which may have served as a gate-keeper's cottage.

On the east side of the court are seventeen magazines, the first nine containing whitewashed brick supports for shelves. In the fifteenth are a few bins at the east end which is all that has survived. There was a veranda in front of these and outside the first may have been an altar, for upright rolls of whitewashed mud appear projecting from the screen wall. At the back of the first magazine to the west is a small chamber entered only from the east—west alley. Behind the rest runs a narrow guard-passage entered from the north end. The first eleven magazines were dug by Petrie (No. 17, op. cit. 23). Each of them has a thin screen wall projecting from the north wall just inside the door. The thirteenth and fourteenth have a square brick pier by the entrance. The latter and the fifteenth contain bins. North of these was a building whose roof was supported on square brick piers of which the western three remain, the rest having collapsed in the falling in of the great pit.

Though it is almost certainly not the present building which is shown, the tomb of Meryrēc¹ gives us a very good idea of what it was like (Fig. 16). The scene shows rows of magazines facing on to two courts separated by a cross-passage in which is a light pavilion, probably of wood. The courts contain trees, and in front of the magazines is a veranda with wooden or even stone columns. The magazines on either side of the upper court shown contain valuables such as vases and ingots of precious materials, treasure chests and stuffs, and sealed wine jars. The rest contain provisions, corn, bread, fish, more wine.

#### **OBJECTS**

- 31/517. Fragment of faience ring with two frogs in the round as bezel, 1.8 cm. long (Wellcome).
  - 518. Four toothed flints (British Museum).
  - 520. Bronze knife, 9.4 cm. long (Glasgow).
  - 521. Bronze nail, 3.4 cm. long (Wellcome).
  - 522. Three faience amulets, # between 1, 3.7 cm. long (one in Cairo).
  - 532. Sherd of Late Helladic IIIa ware, 4.8 cm. long (Ashmolean). (Pl. CIX. 2.)
  - 533. Fragment of alabaster spoon, 7 cm. long (Wellcome).
  - 534. Two bronze needles, 10.2 and 8.2 cm. long (Wellcome).
  - 535. 

    √ in faience for inlay, 5 cm. high (Cairo).
  - 536. Part of faience plaque showing bird and flower, 7 cm. long (Cairo). (Pl. LXXVI. 6.)
  - 537. Fragments of alabaster cup carved like a lotus (Cairo).
  - 539. Fragment of faience inlay, 3.1 cm. high (Cairo).
  - 544. Bronze stylus, 14.5 cm. long (Wellcome).
  - 545. Bronze knife with curled tang, 10.4 cm. long (Cairo).
  - 546. Wooden kohl stick, 7 cm. long (Wellcome).
  - 547. Two sherds of Late Helladic IIIa ware (Wellcome). (Pl. CIX. 2.)
  - 548. Bronze ring, 3.4 cm. diameter (Wellcome).
  - 549. Part of carnelian ring with figure of princess with hand to mouth, 1.2 cm. high (Wellcome).
  - 551. Faience disk, 1.9 cm. diameter (Wellcome).
  - 552. Part of faience kohl pot with titles of a princess, 4·1 cm. high (Wellcome).
  - 553. Three fragments of Late Helladic IIIa pilgrim flask (Ashmolean). (Pl. CIX. 2.)
  - 554. Bronze stylus, 14.8 cm. long (Cairo).
  - 555. Two bronze needles, one with wooden guard, 12.2 and 9.7 cm. long (Wellcome).
  - 556. Two fragments of faience throwing-stick, one with part of the King's name (Wellcome).
  - 557. Bronze sheath, 7.1 cm. long (Cairo).
  - 560. Sherd of Late Helladic IIIa ware from a bowl (Cairo). (Pl. CIX. 2.)
  - 561. Ditto (Ashmolean). (Pl. CIX. 2.)
  - 562. Alabaster disk, 3-1 cm. diameter (Wellcome).
  - 564. Sherd of Late Helladic IIIa ware (Ashmolean). (Pl. CIX. 2.)
  - 577. Bronze chisel, 11.6 cm. long (Cairo).

Davies, Amarna, I, Pl. XXXI.

- 578. Roman bronze coin from burial, much worn (Wellcome).
- 579. Early Arab fire-bomb? 12.5 cm. high (Wellcome.)
- 581. Sculptor's trial piece in limestone showing head of a young king, Smenkhkarē (?), 16·5 cm. high (British Museum). (Pl. LXXIV. 7.)
- 582. Foot and part of pedestal of sandstone statuette, 9 cm. long (Ashmolean). Perhaps from the same statue as 31/583 from the King's House, q.v. [p. 88 above].
- 585. Fragment of cartonnage from near the Roman burial.
- 587. Bronze knife, 11.2 cm. long (Wellcome).
- 588. Small bronze adze with part of wooden shaft, 8.1 cm. long (British Museum).
- 589. Bronze pin decorated at the end, 6.7 cm. long (Wellcome).
- 590. Panel of wooden door painted with later name of Aten, 37 cm. high.
- 591. Wooden coffinette inscribed for Ineni, 42 cm. long (British Museum), containing 592. (Pls. LXXIV. 9 and CIV.)
- 592. Two pairs of ivory castanets in the shape of hands with bracelets, pierced at the end, 20 cm. and 14 cm. long. From inside 591 (New York and Cairo). (Pl. LXXIV. 10.)
- 593. Fragment of rough limestone offering-table with slots for inlay, 20.5 cm. square.
- 594. Sculptor's trial piece in purple sandstone showing hieroglyphs well executed on one side sketched on the other, 21 cm. square (Cairo). (Pl. LXXV. 1, 2.)
- 597. Lotus of bone, flower painted red, 4.7 cm. high (Cairo).
- 598. Three bronze disks (? Roman coins but not from near burial).
- 600. Alabaster vase inscribed with names and titles of Ḥatshepsut (the Amūn erased) and with the amount of the contents 24½ hin. It has a flat lid with a flange. 34·5 cm. high (Cairo). It will contain approximately 7,900 c.c. of water without the lid and 7,850 c.c. with the lid on. (Pl. LXXIV. 8.)

Faience bearing the names of Amenophis III, Type I. A. 1a; Akhenaten, Type I. A. 2a; and Smenkh-karë, Type I. A. 3a. Petrie expressly states that his only finds were mud jar-sealings.

# 4. Hat-Aten, the Small Temple or Chapel Royal (Pls. XLVI. 5, 6, and XLVII. 1-4)

This Temple, no doubt Ḥat-Aten par excellence, is about 200 metres long by over 100 metres broad. Unlike that of the Great Temple, its temenos wall is heavily buttressed on all sides but the west. The bricks of this wall are of exceptional size,  $37 \times 19 \times 14.5$  cm. Outside the east end there seem to be traces of flower-beds, while the street between it and the buildings just described was bordered by an avenue of trees.

(a) The Entrance. The main entrance lies to the west between massive pylon towers of brick, each with a low plinth and two slots for flagstaffs. Air spaces and timber to obviate the shrinkage of the bricks run through them (Pl. XLVI. 5). In front of the gateway project whitewashed brick walls with a door whose stone threshold, made up of several blocks, shows that it had a double leaf. Stone sockets are provided to bolt back the doors. Within and without is mud paving. On either side of the main entrance, in the thickness of the gateway, was evidently some very heavy stone lining, the plaster foundations of which run right across. Twenty centimetres above this was another layer of plaster for lighter wings or jambs, and 20 cm. above that the plaster foundation of the paving blocks. The brick offsets which are seen on either side have a rough face and could only have been used to tie in the great stone antae of the gate proper (Pl. XLVI. 6). All three levels of plaster bear the marks of blocks and the imprint of

<sup>&</sup>lt;sup>1</sup> The north-east and south-east buttresses are curiously placed on the actual corners.

<sup>&</sup>lt;sup>2</sup> Correct therefore C. of A. II, p. 98, n. 1.

masons' signs (Fig. 17 and Pl. XLVII. 3). This type of gateway is precisely that shown in the tomb of Tutu where, as we shall see, the only representation of the Small Temple exists (see below, Fig. 19).<sup>1</sup>

Minor entrances also provided with projecting walls and paved with stone existed to north and south. On either side of the northern gate are low brick benches. On the inner face of the walls between these gates and the pylon towers are niches apparently for sandstone stelae of

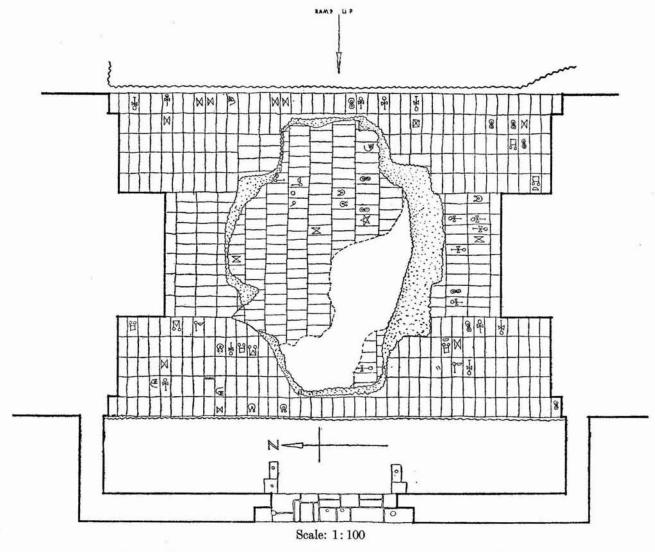


Fig. 17. Masons' marks on the foundation plaster at the entrance to Hat-Aten.

which fragments were found. That to the north was blocked by a wall. The two small spaces in the thickness of the wall may have been for the sake of economy.

(b) The First Court. From the main gate a whitewashed mud ramp leads down to the first court. On either side are offering-tables of whitewashed mud brick. The first two nearest the entrance are replaced by oblong bases of mixed stone and brick. These may either have supported statues or have been similar to those shown by the entrance to the first court of Gem-Aten in the Great Temple (see above, p. 15) (Pl. XLVII. 1). Between these offering-tables

<sup>&</sup>lt;sup>1</sup> Davies, op. cit. VI, Pl. XX.

stood an altar of mud brick of which no trace remains but the lines of brick-dust in the sand. The whole of the court shows signs of having been paved with mud.

At the east end are gateways of the same style as those leading in from the Sikket es-Sulţân. The projecting walls, however, show no returns and are merely supports for the ramps which rise to the level of the second court. The side gateways were paved with stone. That in the middle shows signs of a single stone anta, the actual paving being of mud.

(c) The Second Court. Within the gates are niches for stelae. That to the north still retains the plaster foundations. These stelae were of granite. This court has also gates leading out north and south. These are evidently the private entrances for the King and the priests, respectively. The southern entrance has a small porter's lodge inside and two low whitewashed walls without, curving westwards as if to mark the approach. The buttress east of this has a stone corner as if there was some danger of damage from careless driving. Outside this gate was a dump of stone from the destruction of the Sanctuary (cf. the dump south of the Great Temple, p. 11). Rather to the north of the main axis are traces of brick and plaster foundations. These are almost certainly those of the great stela shown in Tutu's tomb (Davies, op. cit. VI, Pl. XX, and our Fig. 19).

Connected with the southern pylon tower at the east end is a small building consisting of an entrance-hall, against the north wall of which there seems to be an altar, an inner corridor reached by two doors, and finally, three small rooms, the western of which has a niche for a bed. Numerous chips of carved stone were found here, the only distinguishable fragments being from a small uraeus cornice 20 cm. high with yellow snakes on a red ground. This building corresponds exactly in type and position to the Priests' Houses by the Sanctuary of the Great Temple (see above, p. 7). The gateways at the east end of the second court are of exactly the same type as those between the first and second. It is possible that the wall south of the northern gate is hollow, at all events the inner faces seem reasonably smooth.

(d) The Sanctuary Court. This court is reached only by the flanking gates, the main entrance leading only to the Sanctuary itself. There are no niches for stelae within the gates. The north side is bare. The east end of the Sanctuary itself is surrounded by trees.

In the southern half are a number of buildings. In the south-east corner is a small brick building whose stone thresholds survive. There is an entrance-lobby which gives access to two medium-sized rooms on the north and west sides of the house; the western room leads to a square room with a brick dais against the south wall, which is here the temenos wall, and a stone lustration slab next to it. There is a tiny room in the south-east corner. All the rooms show traces of whitewash and mud flooring. North-west of this is a brick building approached by a ramp from the west. It looks not unlike a subsidiary chapel, but the presence of so many internal divisions argues against this. Finally, west of this again is a single room entered from the west and paved in brick. Its walls are thick and well built. It is connected with the south wing of the Sanctuary by a number of lighter walls, which seem to have belonged to a small mud-paved house, in one of the rooms of which is a brick dais.

(e) The Sanctuary. Since this was originally excavated our knowledge of such buildings has been increased by the clearance of the Great Temple, and we are therefore able to correct in many details the restored plan given in the preliminary report. A plan of the existing remains

<sup>1</sup> JEA. XVIII, Pl. XVI [reproduced in this memoir as our Pl. XVI]. It was not until the Great Temple had been

is given in Pl. XVII, and it can be seen how closely it conforms to that shown in Pl. VII. On either side of the outer court are projecting wings. The outer walls were of stone, but the partitions and additions are in brick and the paving is of mud. From this court a mud-paved ramp leads up to the first court of the Sanctuary proper (Pl. XLVII. 2). It passes between two thin pylon towers, and wall-trenches on either side seem to indicate the presence of a balustrade. At the west end of this court the depressions for the foundations of offering-tables are exceptionally clear. A great mass of plaster in the centre perhaps marks the position of an altar. Next come

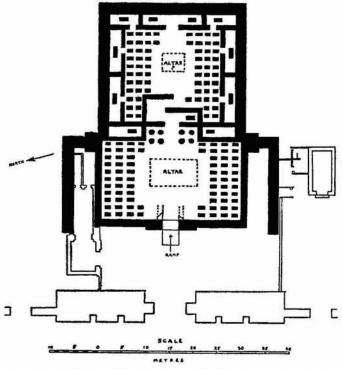


Fig. 18. Hat-Aten: Sketch-plan of the Sanctuary (restored).

the pylons¹ flanking the gate to the inner court, and from the presence of column drums of sandstone in front of them it seems probable that there was a colonnade in front of each tower as there was in the Great Temple. Whether the life-size statues of fine limestone (see below, 31/340, &c., and Pl. LXXV. 4, 5) stood between the columns we do not know. The entrance is of the same winding type as we have seen before (see above, pp. 8, 9). The inner court is surrounded by small chapels each containing its offering-table or altar. The court itself was filled with offering-tables, and though there is no trace of a High Altar we can be certain that there was one.

The picture in the Tomb of Tutu already mentioned is the only certain contemporary representation of this temple (Fig. 19). Trees are shown, as they never are in pictures of the Great Temple. The entrance shows a gate between pylon towers with two antae on each side,

excavated that we realized the hypaethral nature of these shrines. [Unfortunately Mr. Lavers has been unable to submit a corrected plan of the Sanctuary. In the following description of the Sanctuary, therefore, Pl. XVI should be ignored and the reader should refer to the plan of the existing remains (Pl. XVII) and to Fig. 18 in which an attempt is made to provide a restored plan embodying our final appreciation of the remains. See also the additional remarks on pp. 96, 97 below.]

<sup>&</sup>lt;sup>1</sup> [But see the cautionary remarks, p. 97 below.]

which, as we have seen, is the only possible interpretation of the existing remains. The offeringtables in the first court are shown as well as the altar, though the latter has been graced with

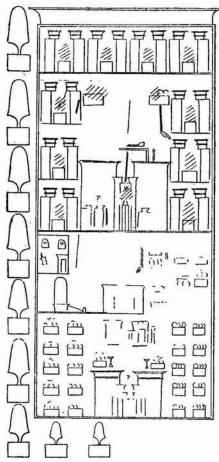


Fig. 19. Representation of Hat-Aten in the tomb of Tutu (Davies, Amarna, VI, Pl. XX).

pylon towers which it can hardly have possessed unless there were very thin ones at the top of the ramp. Next comes a gateway, on the left of which is the stela in a position corresponding to the remains of foundations in the second court. The Priest's House is not shown unless the scanty remains to the right are meant for it. Of the slaughterers' yard shown in the picture there is no trace. It must have been a very light structure, probably little more than a fenced enclosure. Next comes the entrance to the Sanctuary, the gates on either side which led into the court being shown in front of the pylon towers. The wings are not shown, but the winding entrance is conventionally illustrated. The High Altar, if such there was, has disappeared, but the surrounding chambers are well shown.

[Additional Observations on the Sanctuary. It has already been noted that the plan of the Sanctuary in Pl. XVI is inaccurate and does not record our final interpretation of the evidence in the light of the additional experience gained by the excavation of the Great Temple. A plan of the existing remains will be found in Pl. XVII, and in order that our conclusions may be appreciated more easily a restored plan, prepared by myself, is given in Fig. 18. This plan has been carefully built up on the plan of the existing remains, and its general layout and dimensions are accurate, but the interpretation of the existing remains is naturally my own, and neither Mr. Pendlebury nor Mr. Lavers can be held responsible for it. Since, in fact, the reconstruction which I feel is imposed

by the existing remains differs in certain respects from the account already given by Mr. Pendlebury, some additional comment is necessary and may be helpful.

It is evident that Mr. Pendlebury's claim that the plan of the Sanctuary conforms closely to that of the Sanctuary of the Great Temple is amply justified, though the Sanctuary of the Great Temple is somewhat more elaborate than that of the earlier building. In the plan in Pl. I, admittedly very sketchy, Mr. Lavers has indicated the existence of two chambers on the north and south sides of the outer court of the Sanctuary proper, exactly as in the Great Temple (Pl. VIII). This is, perhaps, only a slip of the pen, for it is abundantly clear from Pl. XVII that the offering-tables extended up to the wall of the court, the general appearance of which, therefore, must have been very similar to that given in Fig. 18. This outer court is approached from the west by an ascending brick ramp, the floor of the gateway itself being paved with stone; this ramp, with a low balustrade, appears to have continued to the east as a low causeway and probably continued as far as the altar. Approximately in the centre of the court was a stone structure which presumably, but not certainly, was an altar: this presumed altar could not have occupied an area appreciably less than that enclosed by dotted lines on the restored plan.

Mr. Pendlebury has stated (p. 95 above) that there were pylons flanking the entrance to the inner court and in Pl. I Mr. Lavers has indicated two pylons with four columns in front of each. The existing remains do not seem to justify such an interpretation. If there had been solid brick pylons at this point, they would have been of very peculiar proportions and there would certainly have been some traces of brickwork, whereas, as far as my memory serves me, we found no signs of brick at this point. Moreover, if there had been pylons, there would hardly have been room for columns between them and the altar. In the restored plan, therefore, I have felt compelled to indicate a recess on each side of the entrance and to place the columns in it: the exact siting, spacing, and size of the columns is hypothetical, but there certainly must have been columns at about this spot, and it is possible that the life-size limestone statues stood between them. To north and south of these recesses was a chamber with an offering-table, but it will be noticed that in the restored plan no doors have been given to these rooms. The omission is deliberate since it is uncertain whether they are to be interpreted as the two rooms which are found on either side of the pylons of the Great Temple and which opened into the outer court, or as the other two rooms with offering-tables which were on either side of the entrance porch and opened into the inner court (Pl. VIII). My personal impression is that in Hat-Aten these rooms had doors in their west walls, but this cannot be proved.

The entrance to the inner court is of the same winding type that we have already seen in the Great Temple (Pl. VIII) but much simplified. There is no certain evidence of the subdivision of this winding entrance that was found in the Great Temple, nor is there a separate porch or ante-room with offering-tables. The place of the latter seems to be taken by the recess with a single offering-table to the south of the entrance.<sup>1</sup>

The restoration of the inner court is relatively straightforward. The arrangement of the offering-tables is that which best agrees with the existing remains. Although no traces of an altar remain, it is a reasonable assumption that one must have existed, but its exact position and dimensions are uncertain. There are, however, some divergences between Fig. 18 and the summary indications in Pl. I. The very clear and well-defined foundation trenches make it impossible to restore more than two chambers on the north and south sides of the court, and not three as in Pl. I. Again, in Pl. I four rooms are marked at the east end of the court as in the Great Temple (Pl. VIII). This arrangement hardly accords with the existing remains: the foundation trench does not continue across the court, nor is there any cross trench at right angles to it on the main axis, a trench which would have been imperative if there had been four rooms. I have restored, therefore, at the east end of the Sanctuary two small rooms flanking a very much larger room with a wide entrance on the main axis of the temple. It is hardly necessary to add that the position of the doors of these side chambers is uncertain; to emphasize this point the doors are represented in Fig. 18 by simple gaps. H. W. F.]

## OBJECTS

Pylon I: South Gate

31/406. Roman quern. Lower stone granite, upper sandstone with iron pin and hole for handle, 39 cm. diameter.

<sup>&</sup>lt;sup>1</sup> [It is unlikely that this is to be imagined as standing in a separate room opening into the inner court, as in the corresponding part of the Great Temple, for then not only would the entrance be narrowed considerably, but it would have been pushed to the north of the axis.]

446. Fragment of alabaster incised with a nome sign, 5.9 cm. high (Cairo). (Pl. LXXVI. 7.)

450. 145 small silver Arab coins (Arab Museum, Cairo).

Faience ring of Smenkhkarēc, Type I. A. 3a.

#### Central Gate

31/- Faience pendant, cartouche showing early Aten names, Type IV. E. 5.

#### North Gate

31/365. Fragment of limestone statue. (Pl. LXXV. 4.)

453. Uraeus head in sandstone, 7.2 cm. long (Wellcome).

454. Hawk in limestone, 6.5 cm. high (Wellcome).

455. Wooden leg of miniature chair in the form of a lion's paw, 5.5 cm. high (Wellcome).

### Court I: South-west Corner

31/421. Bronze needle, 7.5 cm. long.

## Pylon II

31/323. Bronze needle, 9.3 cm. long.

324. Hand and forearm of quartzite statuette, 8 cm. long (New York). (Pl. LXXVI. 7.)

341. Fragment of faience plaque, 3.6 cm. long (Eton).

363. Top of miniature limestone stela (?) with scratched lines, 13 cm. across (Cairo). (Pl. LXXVI. 4.)

471. Fragment of faience helmet, 7.3 cm. long.

472. Alabaster disk, 2.7 cm. diameter (Wellcome).

475. Rim of variegated glass bottle, 2 cm. long.

Faience ring of Akhenaten, Type I. A. 2a.

Mould for ring of Tut'ankhamun, Type I. A. 4d (Amun name).

### Court II: South Gate

31/381. Front of kilt of life-size statue of the King in fine limestone, 12.8 cm. high (Wellcome).

#### Priest's House

31/338. Fragment of faience plaque, 4.6 cm. high (Eton).

Faience rings of Amenophis III, Type I. A. 1a, and Tut'ankhaten, Type I. A. 4a.

## Pylon III

31/401. Fragment of alabaster jar.

#### Sanctuary Court: East End

31/320. Fragment of rim of alabaster vase.

## South-east Building

31/321. Two fragments of bronze.

322. Fragment of faience bowl in shape of fish, 7 cm. high (Ashmolean).

## South Side

31/467. Eye and cheek of wooden statue with slots for inlay, 15 cm. high (Cairo).

468. Lotus flower in pottery from a vase, 9 cm. long.

469. Fragment of limestone glazed in blue.

470. Ditto, with part of early Aten name, 4.2 cm. long.

#### North-west Corner

31/414. Uraeus head in blue faience, 3.5 cm. across.

#### Sanctuary: South-west Corner

- 31/350. Broken quartzite head of a princess from a dyad, 14 cm. high (San Diego). (Pl. LXXIV. 11.)
  - 360. Rim of faience bottle, 2.4 cm. diameter.
  - 361. Fragment of wood, 11.1 cm. long (Wellcome).
  - 362. Wrist of life-size statue in hard limestone with early Aten name, 7.6 cm. long (Wellcome). (Pl. LXXV. 4.)

Faience ring of Akhenaten, Type I. A. 2b.

#### North-west Corner

- 31/339. Fragments of gold leaf.
  - 340. Elbow and other fragments of life-size statue in hard limestone (Cairo). (Pl. LXXV. 4, 5.)
  - 342. Fragment of wood inlaid with gold, 6.3 cm. long.
  - 358. Faience inlay representing  $\bigcirc$  sign, 7.3 cm. long (Cairo).
  - 359. Thigh of life-size statue of the King in hard limestone, 57 cm. long (Wellcome). (Pl. LXXV. 5.)

#### South Side

- 31/493. Front of wig with part of uraeus of hard limestone statue. Life size, 12 cm. high (Wellcome). (Pl. LXXV. 4.)
  - 498. Bronze stylus, 10 cm. long (Wellcome).

#### Central

- 31/380. Limestone block showing part of human figure, 21.5 cm. high.
  - 412. Fragment of decorated black granite, 13 cm. high (Ashmolean).
  - 424. Fragment of faience possibly for a kilt, 2.9 cm. high (Wellcome).
  - 425. Two fragments of gold leaf.
  - 445. Scarab in glazed limestone with name of Amen-Rēc, 2 cm. high (Wellcome).
  - 451. Block of limestone with deep relief of life-size foot, 26 cm. high (Cairo). (Pl. LXXV. 7.)
  - 461. Fragment of statue in hard limestone, 16 cm. high (Wellcome). (Pl. LXXV. 5.)
  - 462. Fragment of red granite with relief of lotus buds, 18 cm. high.
  - 465. Small pyramidal object of black limestone, 1 cm. high (Cairo).
  - 510. Fragment of limestone with part of royal titles, 3.6 cm. long.

Ring of Amenophis III, Type I. A. 1a.

From the Sanctuary also came a few limestone blocks with reliefs (Pl. XLVII. 4).

## Outside the Temenos Wall: North Side, East End

- 31/463. Alabaster reel.
  - 466. Fragment of faience plaque, 3.2 cm. long (Wellcome).

### North Side, West End

31/459. Bronze stylus, 10.6 cm. long (Wellcome).

Faience ring of Tut'ankhaten, Type I. A. 4a.

#### South-east Corner

- 31/410. Forearm of life-size statue in hard limestone with early Aten names, 16 cm. long (Wellcome). (Pl. LXXV. 4.)
  - 413. Fragment of blue faience wig, 7 cm. long.
  - 443. Fragment of statue in hard limestone showing names of King and Queen, 8.9 cm. long (Wellcome). (Pl. LXXV. 4.)

# South Side, East End

31/395. Part of wig and ear of statuette of the Queen in hard limestone, 10·5 cm. across (Wellcome). (Pl. LXXV. 4.)

#### South-west Corner

- 31/422. Part of foot and sandal of life-size statue in hard limestone, 14 cm. long (Cairo). (Pl. LXXV. 5.)
  - 435. Statuette (legs and head missing) in painted limestone of the King, 10·5 cm. high (Brussels). (Pl. LXXV. 6.)

# Dump opposite the South Door of Court II

- 31/392. Fragments of arms of life-size statue in hard limestone (Cairo). (Pl. LXXV. 4.)
  - 393. Part of foot of life-size statue in black granite (Wellcome).
  - 396. Elbow of half life-size statue in hard limestone (Wellcome). (Pl. LXXV. 4.)
  - 397. Fragment of life-size ditto (Wellcome). (Pl. LXXV. 4.)
  - 398. Fragment of alabaster jar, 6 cm. high.
  - 399. Faience cylinder, 7.4 cm. long.
  - 400. Fragment of the cheek and eye of life-size statue in hard limestone (Wellcome). (Pl. LXXVI. 7.)
  - 402. Fragment of faience.
  - 408. Fragment of painted limestone.
  - 419. Bronze stylus, 13.2 cm. long.
  - 420. Pierced clay disk, 3.7 cm. diameter.

Near this dump were found two rubbish-pits containing pots with the remains of paint in them.

# 5. The Priests' Quarters, &c. (P. 43. 1 and 2) (Pl. XLVII. 5, 6)

These buildings lie to the south of the Small Temple in much the same relative position as do the Magazines south of the Great Temple (pp. 29, 30).

P. 43. 1. This block comprises magazines. All the bricks are stamped 3.1 Its main entrance is from the Sikket es-Sultan. First comes a court. Then the building is divided into two. Down the centre of the northern section runs a long court probably open to the sky. Off this open magazines on either side. The first ten to the north contain ovens at the far end. A few have small screen walls or bins near the door. Of those to the south the first four have fire-places in the south-west corner as well as partition walls. The fifth contained a pit in the north-west corner lined with tethering stones bearing the cartouche of Akhenaten (Pl. XLVII. 5). Opposite the tenth magazine the passage narrows down. Instead of the eleventh magazine to the north is a passage through to the street. The twelfth to fourteenth magazines on this side contain three ovens. The eighteenth is taken up by a flight of stairs. To the south the fourteenth and fifteenth magazines are larger. There are square piers towards the front and a small room at the back containing ovens. They also have a kind of forehall projecting into the passage. The sixteenth division is a passage through to the southern section which is also reached from the big court to the west. This section is divided into two. The eastern half has doors both east and south. Along the south wall are square fire-places and brick bread-racks of the type seen in the bakery of T. 36. 36.2 The communicating door has been blocked between this and the western division and an oven has been built in front of it. This last division consists of an open court at the west end of the north wall of which are small houses of the Workmen's Village type. The three western houses boast brick daises and plaster lustration slabs as well as traces of stairs to the roof.

<sup>&</sup>lt;sup>1</sup> [For other bricks from P. 43. 1 and 2 stamped "[The Storehouse] of Service of the Aten" see Pl. LXXXIII. vii and p. 150 below.]

<sup>2</sup> C. of A. II. 45.

P. 43. 21 falls into two main blocks. A. This is entered from the passage to the west. First comes an open court containing trees. Off the south side of this open magazines and a bakery. Off the north side open four magazines, a passage to the street, and another open court which contains an oval cutting in the virgin soil lined with plaster and a stone-lined press (?) 45 cm. deep with a sunk trough towards its north end. The north-east corner of the block is filled by a big square room with brick piers and three rooms opening to the south. The entrance passage to this block is whitewashed. Below the floor-level was found the corpse of a man in a rough wooden coffin. The south-east corner of the block seems to consist of a small house but the walls are too broken to be sure. B. The second block has a small porch whence an open court is reached. There is a kind of west entrance-hall off which opens a bedroom with the niche to the east. The main room is brick-paved and contains a single column base sunk flush with the floor (58 cm. diameter to support a wooden column of 28 cm. at the bottom). To the south of this is another bedroom. To the north and east are rooms with heavily plastered walls and floors and brick supports for shelves (Pl. XLVII. 6). Stairs run up in the north-west corner. The rest of the block is taken up with servants' quarters, the rooms to the north being paved with stone.

Lastly comes the big depression in the sand to the east. This is walled round. Along the north side runs a mud paving supported by a heavy brick wall to the south. On the north-east corner of this paving are the surviving square brick piers which must have held up a veranda along the north side. Again it is impossible to say whether this was ever a pond or not. Certainly the sand for the filling below the Sanctuary floor must have come from it, but it may well have been waterproofed afterwards.

#### **OBJECTS**

- P. 43. 1. 31/429. Two-sided seal of white steatite engraved with the name of Amenophis III and Tyi, 1.7 cm. long (Cairo).
  - 431. Fragment of faience inlay, 2.6 cm. high (Wellcome).
  - 434. Ivory peg painted red, 2.2 cm. high (Wellcome).
  - 436. Half a pair of bronze scissors, 5.3 cm. long (British Museum).
  - 437. Limestone head-rest, 12 cm. high.
  - 438. Headless uraeus in pottery with a cup attached in front, 6 cm. high.
  - 439. Five bronze styluses and a needle (Cairo).
  - 441. Figurine of animal in grey pottery, 3 cm. long (Wellcome).
  - 442. Alabaster roundel, 3 cm. diameter (Wellcome).
  - 473. Tethering stone with the name of Akhenaten, 15 cm. high.
  - 477. Faience scarab with , 1.3 cm. long (Wellcome).
  - 480. Fragment of coils of snake on pottery base, 12.5 cm. long.
  - 481. Part of foot of sandstone statue, 9.5 cm. long (Wellcome).
  - 488. Two uraei in pottery, 5.6 cm. high.
  - 500 and 509. Fragments of blue glaze statuette of Asiatic. The robe inscribed \( \) \( \) \( \) \( \) \( \) on one side and \( \) \( \) \( \) \( \) on the other. Head 11 cm., fragment of skirt 10 cm. high (Cairo). (Pl. LXXVI. 1, 2.)
  - 501. Grotesque full-face on limestone fragment, 8·1 cm. high (Cairo). (Pl. LXXVI. 3.)
  - 503. Fragment of group of monkeys in limestone, 4 cm. high.

<sup>&</sup>lt;sup>1</sup> [For stamped bricks from this building see Pl. LXXXIII. vII and p. 150 below. No bricks stamped hwt as in Pl. LXXXIII. I were found here.]

- 505. Bronze nail, 3.5 cm. long (Eton).
- 506. Fragment of faience like the bottom of a fringed skirt, 4.6 cm. high (Cairo).
- 507. Whetstone.
- 508. Small plain stela (?).
- 511. Hand of sandstone statuette supporting part of offering-table, 4.2 cm. long (Wellcome).
- 512. Part of front of kilt of life-size sandstone statue of the Queen with her titles, 23 cm. high (Wellcome).
- 514. Alabaster lid, 4.8 cm. diameter (Wellcome).
- 524. Fragment of pottery with design of \( \) and \( \)'s, 10 cm. high.
- 525. Ear in pottery, 4.6 cm. long.
- 526. Bronze knife, 8.6 cm. long (Winchester).
- 527. Five bronze rods (Wellcome).
- 529. Fragment of blue glazed footstool (?) showing belly of captive, 6 cm. long.
- 540. Pottery cap, 4 cm. diameter.
- 541. Bronze nail, 2.2 cm. long (Channing).
- 550. Haematite kohl stick with silver binding, 8.7 cm. long (New York).

Many learners' pieces in sandstone inscribed with hieroglyphs. (Pl. LXXV. 3.)

Faience cartouche of Akhenaten, Type IV. E. 2.

Ditto, with early Aten name, Type IV. E. 6.

- P. 43. 2. 31/474. Hand and wrist of limestone statuette, 5.5 cm. long (Copenhagen).
  - 478. Bronze fish-hook, 2 cm. long (Winchester).
  - 479. Two fragments of faience vase (Wellcome).
  - 490. Fragment of lead, 3.6 cm. long.
  - 494. Lower part of pottery figurine of a woman, 8.3 cm. long.
  - 495. Part of arm of hard limestone statue with early Aten name, 6.8 cm. long (Wellcome). (Pl. LXXV. 4.)
  - 497. Fragment of glazed scarab, 1.3 cm. long (Wellcome).
  - 499. Pyramidal object of wood, 5 cm. high, with ivory handle, 9 cm. long. Papyrus smoother (?), 14 cm. high (Wellcome).

Faience rings of Akhenaten, Types I. A. 2g and I. A. 2i.

The "pond" contained nothing.

## SUMMARY OF UNIMPORTANT OBJECTS FROM THE ROYAL ESTATE

#### P. 42. 1.

The Garden

31/-. Pottery VI. 1, XV. 11, (3), XVI. 3 (4), XVIII. 5.

The Bridge

31/-. Ring I. C. 21. Scarab II. D. 1. Pendants IV. A. 11, IV. C. 3, IV. C. 4, IV. C. 7, IV. C. 19. Mould IV. C. 12a. Beads XIX (5), XXII (3), XXIV (8), XXXII (17), L (6), LI.

The House

31/-. Rings I. C. 5, I. C. 11. Pendants IV. A. 2, IV. A. 5, IV. C. 4, IV. C. 5, IV. C. 7, IV. C. 8 (3), IV. C. 9, IV. C. 11, IV. C. 19. Inlays 495, 588 (2). Moulds IV. C. 1a, XXXIX. Beads I (2), VIII (3), XIX (4), XXII (7), XXIV, XXV, XXIX (2), XXXI, XXXII, XLI, XLIV (2), L (17), LV, LVIII.

#### P. 42. 2

### The Magazines

31/519. Fragment of alabaster lid. 523. Many glass rods. 538. Fragment of glass. 543. Fragments of variegated glass. 558. Fragments of limestone lid. 559. Piece of alabaster ring. 564. Rough

alabaster lid. 565. Part of faience cylinder. 566. Bronze stylus. 569. Fragment of faience. 571. Ditto. 572. Fragment of alabaster. 573. Ditto. 574. Ditto. 575. Fragment of wood. 576. Fragment of bronze. 586. Fragment of faience. Rings I. C. 5 (10), I. C. 19, I. C. 21, I. C. 29, I. C. 31 (2), I. C. 50. Scarab II. D. 1. Pendants IV. A. 10, IV. B. 12, IV. B. 13, IV. B. 18, IV. C. 3 (2), IV. C. 4, IV. C. 5, IV. C. 8, IV. C. 9, IV. C. 10, IV. C. 11 (17), IV. C. 12b, IV. C. 13a, IV. C. 40, IV. C. 50, IV. D. 3, IV. D. 10 (6). Inlay 484. Moulds IV. C. 10, IV. C. 25. Beads I, IV, VI (9), VII, VIII (10), X (11), XI, XIV (12), XVIII (37), XIX (47), XX, XXI (9), XXII (183), XXIII (4), XXIV (103), XXVI, XXVIIIa, XXIX (4), XXXII (286), XL, XLV, XLIX, LIII. Pottery IV. 3 (2), XIV. 4 (3), XV. 6, XV. 11, XV. 15, XVI. 1 (2), XVII. 10, XVII. 12, XX. 2, XXII. 1.

## The Small Temple

# Pylon I: S. Gate

Rings I. B. 2, I. C. 5, I. C. 11. Pendants IV. C. 13a, IV. C. 20, IV. C. 28. Beads V (2), IX, XIV, XXV, XLI (10), XLIII (61), LV.

#### Central Gate

Beads XXV, XXIX (2), XXXI, XXXII, XLVII. Glass rod.

#### N. Gate

31/452. Fragment of curved limestone. 456. Fragment of limestone. 457. Fragment of leather. 458. Fragment of wood. Ring I. C. 27. Pendants IV. A. 10, IV. C. 1a, IV. C. 8, IV. C. 11, IV. C. 13b, IV. C. 25. Mould IV. C. 24. Beads VI (2), XXII, XXIV, XXV, XXVIIIa, XXIX, XXXI, LV (3). Glass rod.

## Court I: Altar

31/-. Pottery IV. 2, XII. 1.

#### SW. corner

31/-. Ring I. C. 26. Pendants IV. C. 8, IV. C. 13a, IV. C. 33. Mould for ring. Inlay 595. Beads XXII, XXIV, XXV, XXXI, LV, LVI.

#### Pylon II

31/-. Rings I. C. 5 (3), I. C. 30. Scarab II. D. 1. Pendants IV. B. 15, IV. C. 1a, IV. C. 11 (2), IV. C. 13b, IV. C. 29. Inlay 535. Mould IV. C. 13b. Beads VI (3), VIII (2), XIX, XXIII, XXIV, XXVII, XXIX (2), XXXI (3), XXXII, XLIII (3), XLVIII, XLIX, LV, LXIV. Glass rod.

#### Court II: S. Gate

31/-. Ring I. D. 9. Pendants IV. C. 8, IV. C. 11, IV. C. 13b. Inlays 459, 498. Beads VIII (2), XXII (4), XXIV (3), XXXI (3), XXXII (5), XXXIII, XLIII, LV (4).

### Priest's House

31/-. Ring I. B. 4. Pendants IV. A. 10, IV. D. 6. Inlay 447. Beads XXXI, XLIII (2). Pottery XII. 1.

#### Sanctuary Court: E. end

31/-. Pendants IV. B. 4, IV. C. 13b. Inlay 505. Beads XXIX, XXXII, XLI, LV.

## SE. building

31/-. Beads XXXI, XXXII. Glass rod.

#### N. side

31/-. Pendants IV. C. 10, IV. D. 2. Beads VIII, IX, XIX, XXI, XXII, XXIV (2), XXV (3), XXIX, XLI, L, LV (3).

S. side

31/-. Pendant IV. B. 20. Bead XXVI.

NW. corner

31/-. Ring I. B. 11. Pendant IV. C. 11. Bead VI.

Sanctuary: SW. corner

31/-. Rings I. B. 4, I. C. 5. Inlays 447, 590. Beads VI, VIII. Glass rod.

W. side

31/-. Pendants IV. A. 1, IV. C. 3.

NW. corner

31/343. Limestone fragment. Pendants IV. C. 8, IV. C. 13b. Mould V. Beads VIII, XIX, XXIV, XXXV, XLI (2).

Central

31/423. Fragment of ribbed faience. 444. Fragment of blue glaze. Ring I. C. 18. Inlay 482. Beads XXV, XXXI, XXXIII (8), XLVIII, L, LV.

Outside the Temenos Wall: N. side, E. end

31/-. Ring I. C. 27. Pendants IV. B. 12, IV. B. 18. Inlay 458. Beads III, IV, X (3), XVIII, XIX (3), XXII (6), XXXI (7), XXXII (5), XLI, XLIII.

N. side, W. end

31/-. Pendants IV. C. 24, IV. D. 10a. Beads XVIII (2), XXII (2), XXIV, XXIX, XXXII (2), XLI.

E. end

31/-. Rings I. B. 4, I. C. 5. Udat eye III. A. Pendants IV. C. 1, IV. C. 6, IV. C. 18 (2). Inlays 447, 484, 584. Beads XIX (3), XXI, XXII (5), XXV, XXXI, XXXII (2), XXXIV, XLI, XLIII (2), LII, LIV, LVIII.

SE. corner

31/-. Rings I. B. 5, I. C. 4, I. C. 13. Pendants IV. A. 5, IV. D. 10 (4). Moulds IV. C. 8, IV. C. 15. Beads XXII (2), XXIV, XXXIII. Pottery IV. 2, VI. 1, VI. 4, XIV. 13, XX. 2. Glass rod.

S. side, E. end

31/-. Pendants IV. C. 8, IV. C. 13b. Inlay 458.

S. side, W. end

31/-. Rings I. B. 4, I. C. 37. Beads XVIII, XIX, XXII, XXIV, XLI.

SW. corner

31/-. Pendants IV. A. 10, IV. C. 3, IV. C. 7. Beads VIII, XVIII, XXII, XXIV.

Dump opposite S. door of Court II

31/-. Scarab II. C. 5. Mould IV. C. 1a. Beads VIII, XIV, XXIV (2), XXXI, XLI (2), XLIII (3), L (45), LV. Pottery XV. 4 (2), XV. 7, XVI. 1.

The Priests' Quarters

P. 43. 1. 31/430. Two disks of pottery. 432. Bronze rod. 433. Ditto. 434. Uraeus head in pottery. 476. Bronze needle. 482. Fragment of pottery uraeus. 486. Bronze rod. 487. Bronze needle. 489.

Pottery coil. 502. Six bronze needles. 504. Two bronze rods. 513. Bronze needle. 528. Two ditto. 542. Bronze rod. Rings I. B. 4 (2), I. B. 12, I. B. 18, I. C. 4, I. C. 5 (7), I. C. 8, I. C. 28, I. C. 32, I. D. 5. Scarabs II. C. 5, II. D. 1. Udat eyes III. A, III. B. 4. Pendants IV. A. 3, IV. A. 5, IV. A. 10, IV. B. 9, IV. B. 20, IV. B. 24, IV. C. 1a, IV. C. 3, IV. C. 4, IV. C. 8 (6), IV. C. 11 (3), IV. D. 7, IV. D. 10a (2), IV. D. 12, IV. D. 14. Inlays 456, 458, 507. Moulds I. C. 26, IV. A. 15, IV. C. 1, IV. C. 10, IV. C. 16, IV. D. 2, 443, 591, VIII. Beads VIII (5), XVIII, XIX, XX, XXII (10), XXIV (6), XXXII (8), XLVII, XLVIII, L (3), LIII, LIV, LV, LVIII, LXIV. Pottery IV. 10 (3), VI. 1 (2), VII. 1. (2), VII. 5 (2), IX. 5, XII. 1 (5), XII. 3 (2), XIV. 5, XV. 4, XV. 23 (many), XVI. 1, XVII. 10, XIX. 3. Many glass rods and hair rings.

P. 43. 2. 31/426. Miniature pottery saucers. 427. Pottery disk. 428. Ditto. 491. Fragment of faience. 496. Part of sheet of bronze. Rings I. C. 3, I. C. 5 (2), I. C. 39. Pendants IV. A. 3, IV. C. 8, IV. C. 11, IV. C. 12b. Inlay 528. Moulds IV. C. 13b, VIII. Beads XIX, XXII (5), XXVI, XXXII (2), XLIII, XLIV, LV. Pottery XIV. 2, XIV. 5, XIV. 8 (2), XVI. 1, XVI. 5, XXII. 1. Many glass rods.

No objects were found in the "pond".

# CHAPTER VI

## THE MAGAZINES BETWEEN THE ROYAL ESTATE AND THE TEMPLE

This group of buildings (Pl. XVIII) falls roughly into three divisions. As a whole it occupies most of the ground between the north wall of the King's Garden and Magazines and the south wall of the Temple Magazines.<sup>1</sup>

The north and south walls of the block are clearly defined in spite of a few structures added on to the outside of them. One can account for the irregular termination at the east end by the supposition that it was in this direction that fresh buildings were being added. But the ragged face presented to the Sikket es-Sulţân is inexplicable. The west side of this road was faced by the high regular walls of the Palace, broken at intervals by magnificent gateways. The east side at either end shows the equally fine frontage of the Great Temple and the Royal Estate. Between these, however, is seen the west end of this block, parts of which almost give the appearance of the façades rather of slum houses than of magazines important enough to be dignified by names.

Possibly the thick wall which appears at intervals may, with several changes of direction, have been originally intended to be the façade.

1. The Western Block. The thick wall already mentioned is visible in a few places but has been broken mainly by the construction of P. 40. 2 and P. 41. 2, the walls of which are now so badly denuded that it is nearly impossible to make any sense of the plan. At the south end the wall may originally have been connected in some way with the equally heavy walls of P. 41. 3. Again, however, it has been broken by the insertion of P. 41. 1.

Few of the individual buildings surrounding the central court need description. P. 41. 3 is very heavily built. Both its east and west walls project some way towards the garden of the Royal Estate but have been cut through to make the road. No entrance can be made out to any of the divisions which seem to have been cellars below a floor of which no trace has survived. The two rooms to the north-east are certainly of this nature. They run down to a depth of 2.45 metres and the north wall is battered. The partition wall between them does not descend as far as the rest but is arched over the space below.

The Magazines Q. 41. 9 and the section south of them, Q. 41. 11, provided innumerable ostraca, some of which, inscribed "Storehouse Rich in Provisions" or "Storehouse of the Ka of 'Ankh-Rē'", may give us the names by which this block of buildings was known [see p. 211 below]. Another interesting fragment bore the year date—17 with a later addition of Year 1 (Pl. XCV, 279; and see below, p. 159).

Built up against the outside of the northern wall of the block are the Magazines Q. 40.4 containing ovens. At the east end of these is a small brick-paved house of which the entrance-hall to the west seemed to have been the main living-room, for it contained a brick dais and fragments of a painted beam with a block pattern of red, black, green, and blue on a yellow ground.

To the south of the block lie the broken walls of Q. 41. 7.

<sup>&</sup>lt;sup>1</sup> [The north end of Pl. XVIII joins the south end of Pl. XII.]

#### **OBJECTS**

- P. 40. 1. This number not assigned.
- P. 40. 2. No objects of importance.
- P. 41. 1 and 3. 31/599. Ten pottery spools.
  - 601. Bronze ring engraved  $\begin{pmatrix} \frac{2}{0} & \frac{1}{2} \\ 0 & \frac{1}{2} \end{pmatrix}$ , 2·2 cm. long (Wellcome).
  - 609. Sherd of Late Helladic IIIa ware (Ashmolean). (Pl. CIX. 2.)
  - 611. Fragment of faience plaque (Wellcome).
  - Faience ring of Smenkhkarēc, Type I. A. 3f.
- P. 41. 2. 32/173. Fragment of limestone learner's piece with hieroglyphs, 10·2 cm. high (Museum of Archaeology and Ethnology, Cambridge).
  - 182. Glazed steatite scarab with # between uraei, 1.3 cm. long (San Diego).
- Q. 40. 1 and 2. These numbers not assigned.
- Q. 40. 3. 33/25. Handle of incense burner in bronze in the shape of a hand, 9-4 cm. long (Cairo). (Pl. LXXVI. 9.)
  - 27. Fragment of grey faience.
- Q. 40. 4. 33/28. Fragment of faience plaque.
  - 29. Bronze nail, 2.8 cm. long.
  - 35. Fragment of faience plaque, 4.7 cm. long (Otago).
- Q. 41. 7. 31/602. Bronze sail needle, 19.8 cm. long (Cairo).
  - 603. Sculptor's trial piece in limestone with caricature of the King on one side and part of a face on the other, 14.5 cm. high (Cairo). (Pl. LXXIV. 4, 5.)
  - 604. Three ditto with faces (East Anglia and Glasgow).
  - 605. Top of Late Helladic IIIa stirrup vase (Cairo). (Pl. CIX. 2.)
  - 606. Two sherds from ditto (Ashmolean). (Pl. CIX. 2.)
  - 607. Base of ditto (Ashmolean). (Pl. CIX. 2.)
- Q. 41. 9. 32/185. Meat-chopper in bronze, 24 cm. long (Cairo). (Pl. LXXVI. 8.) Faience ring of Akhenaten, Type I. A. 2b.
- Q. 41. 11. 32/216. Bronze ring engraved with Akhenaten's name, 2.6 cm. long (Glasgow). Pendant cartouche of Nefertiti, Type IV. E. 4.
- 2. The Central Block. Access to this block is obtained by quite an elaborate gateway, guarded by a porter's lodge, in the north wall, which leads into a large open court. From this a door in the north-west corner gives on to the block already described.

The Magazines Q. 41. 6 are of better construction than the rest and are fronted by a brick paving. Opposite to these is a room containing three neat ovens.

Q. 41. 13 consists mainly of large courts and paddocks for animals; a few mangers exist in the north-east corner.

The overseer of this block and perhaps of the whole quarter evidently lived in the well-built little house Q. 41. 1. This seems to have been built over earlier shanties which had been covered with a clean filling.

Two other small dwelling-houses, Q. 41. 2 and 14, are built up against the south wall of the block. A good terrace wall is built to the south of them, for at this point the road is at a

<sup>&</sup>lt;sup>1</sup> [For another interpretation of this piece see now BIFAO. XLV. 189, 190.]

considerably lower level. The small building farther east had been denuded practically to its foundations and not even a potsherd was found in it.

#### **OBJECTS**

- Q. 41. 1. 32/261. Wooden kohl stick, 5.4 cm. long.
- Q. 41. 2. 32/218. Lead weight, 2.5 cm. high, 25.34 gm.
  - 260. Two sherds of Late Helladic IIIa ware (British Museum and Winchester College). Faience ring of Meritaten, Type I. A. 6a.
- Q. 41. 6. 33/26. Faience uraeus head, 3.4 cm. long (Cairo).
- Q. 41. 13. 33/19. Bronze chisel, 14.2 cm. long (Cairo).
  - 22. Figurine of monkey and harp in sandstone, 6.8 cm. high (Canford).
  - 23. Fragment of ribbed tube in faience, 4.9 cm. high (Cairo).
- Q. 41. 14. 32/183. Fragment of limestone relief showing man worshipping, 8.2 cm. long (St. Paul's).
  - 184. Carnelian ring, 2.6 cm. long (San Diego).
  - 211. Bronze rosette overlaid with gold leaf.
  - 212. Part of figurine of monkey in limestone.
  - Two faience rings of Akhenaten, Types I. A. 2a and I. A. 2b.
- 3. The East Block. This block gives the appearance of having been enlarged. The original portion clearly consisted of Q. 41. 5, 12, 10, 8, and 3, while Q. 41. 4 and R. 41. 3, 4, 5, and 6 are later.

The earlier portion is entered from the north and is separated from the Central Block by a wide passage. Immediately inside the entrance lies the building Q. 41. 5 and 12. This seems to have consisted of a courtyard surrounded by a colonnade of square pillars of which only the southern and eastern rows survive. The northern side, 5, is much ruined, but to the south the rooms, 12, are fairly well preserved and from the presence of ovens and what appears to be a drying-rack in the second room from the west<sup>1</sup> may have been a bakery. To the west lies a much ruined building containing two ovens of mud brick which show no signs of burning though much ash was found near by.

The group 8 again consists of storerooms, though there seems to be a tiny dwelling-house in the middle of the north side with a living-room containing a brick dais and a stone lustration slab.

At the south end of the big courtyard lies 3, which consists merely of a yard containing a huge circular rubbish-pit lined with brick and filled with broken pottery and the ruins of four long magazines entered over stone thresholds.

The later section of this block is the best built in the whole quarter. R. 41. 3 seems to have been mainly concerned with animals, for there are six round mangers in the middle. Along the south side of the court, however, is a veranda, the ceiling supported on a row of four round pillars of mud brick. To the east this veranda gives on to a garden, the outline of the beds being plainly visible (Pl. XLVIII. 4). South of the open square lies a passage from which R. 41. 5 and 4 and Q. 41. 4 are entered.

- R. 41. 5 (Pl. XLVIII. 1) consists of a courtyard off which opens a lobby flanked on each side by a two-columned room. These columns were of specially shaped mud bricks surrounding a central wooden core and covered with fluting in whitewashed plaster. Round the rooms are low whitewashed bins of brick, some of them divided into several sections as if for the storage of several kinds of grain or spice (Pl. XLVIII. 2). Against the wall in which is the door is a brick bench. In these rooms quantities of plaster from the walls were found. This plaster had been painted to represent wooden panelling, the background being pink and the graining and knots in red.
- R. 41. 4 and Q. 41. 4 consist of an open court. To the north is a series of rooms containing ovens. To the east are a number of magazines. These are brick-paved and are in some cases floored with thick white plaster (Pl. XLVIII. 3). In the south-east corner is a room with four square brick piers and to the south are whitewashed magazines.

To the east of the last are a few storerooms which go under the name of R. 41. 6.

#### **OBJECTS**

- Q. 41. 3. 32/230. Bronze knife. (Pl. LXXVI. 8.)
- Q. 41. 4. 32/220. Bronze knife, 9.3 cm. long (St. Paul's). (Pl. LXXVI. 8.)
  - 231. Glazed steatite scarab with lotus design, 1.6 cm. long. (Pl. CIX. 1.)
  - 232. Ditto, of Amenophis III (Copenhagen). (Pl. CIX. 1.)
  - 233. Bronze ring engraved  $\bigcirc$  , 2.4 cm. long (Cairo).
  - 234. Bronze knife, 13.4 cm. long (Copenhagen).
  - 246. Ditto, engraved with squatting figure of the King, 2·1 cm. high (Cairo).
  - 248. Sherd of Late Helladic IIIa amphora (British Museum).
  - 249. Udat eye of steatite engraved with name of Amenophis III, 2-4 cm. long (Cairo). (Pl. CIX. 1.)
  - 250. Bronze weight in form of recumbent bull, inscribed 5 deben, 9 cm. long, weight 437 gm. (Cairo). (Pl. LXXVII. 1.)

Faience ring of Akhenaten, Type I. A. 2b.

Ditto of Tutankhamun, Type I. A. 4c.

- Q. 41. 5. No objects at all.
- Q. 41. 8. 32/268. Sack containing wool, carded wool, and woollen garment (Cairo Agricultural Museum). (Pl. CXI. 2-5.)
  - 272. Bronze adze, 8.2 cm. long (Glasgow).
- Q. 41. 10. 32/277. Faience scaraboid inscribed with ♀, 1.2 cm. high. (Pl. CIX. 1.)
  - 278. Lapis lazuli ring engraved with a fish, 2-2 cm. high (Cairo). (Pl. CIX. 1.)
  - 279. Faience ring inscribed, 2.5 cm. high (Cairo). (Pl. CIX. 1.)
  - 280. Ditto, with two ducks in the round on the bezel (Cairo). (Pl. CIX. 1.)
  - 281. Part of fine-toothed bronze saw, 4.3 cm. long (Cairo).
  - 282. Limestone roundel, 2 cm. diameter. (Pl. CIX. 1.)
  - 283. Sherd of Late Helladic IIIa ware. (Pl. CIX. 1.)

Faience ring of Akhenaten, Type I. A. 2a.

- Q. 41. 12. 33/8. Part of faience wand, 7.2 cm. long (Otago).
  - 9. Green faience pendant of coiled uraeus, 2 cm. high (Cairo).
  - 10. Bronze tweezers, 6 cm. long (Cairo).
  - 12. Bronze needle, 8 cm. long.

- 15. Small pilgrim flask (San Diego). Faience pendant, cartouche of Akhenaten, Type IV. E. 2.
- R. 41. 3. 32/276. Bronze knife, 11.8 cm. long (Copenhagen). Faience ring of Smenkhkarë, Type I. A. 3a.
- R. 41. 4. 32/247. Fragment of faience.
- R. 41. 5. 32/251. Part of wooden base of statue inscribed for Thoth, 3.3 cm. high (Cairo).
  - 252. Fragment of beaten bronze with Akhenaten's name, 4.7 cm. long (Cairo).
  - 253. Bronze rod.
  - 254. Two bronze knives, one curved 28.5 cm. long, one straight with traces of wooden handle, 27 cm. long (Cairo and Copenhagen).
  - 255. Bronze ring of Akhenaten, 2.4 cm. high (East Anglia).
  - 256. Bronze knife, 8-1 cm. long (Stowe).
  - 257. Glazed steatite scarab inscribed \( \sqrt{\psi}\_{\psi} \), 1.6 cm. high (New York). (Pl. CIX. 1.)
  - 258. Ditto, design gone. (Pl. CIX. 1.)
  - 259. Fragments of bronze edging for wood.
- R. 41. 6. 32/269. Bronze ring, 2.8 cm. long (Merchant Taylors).
  - 270. Bronze knife, 8 cm. long (Canford).
  - 271. Wooden socket, 3.5 cm. diameter.
  - Faience ring of Meritaten, Type I. A. 6a.
- 4. The Isolated Buildings. Neither R. 41. 1 nor R. 41. 2 really belong to this quarter at all. They were at the most the houses of the clerks of the works engaged in the building. 1 is a good example of the ordinary small house. Its entrance-hall lies to the west and in it was found a loose column base (63 and 29 cm.). R. 41. 2 was more flimsily built but boasted a number of outbuildings, corn-bins, and courtyards. In one of the latter was found the body of a male child buried in a vase of the type XII. 1.

# OBJECTS

- R. 41. 1. 32/262. Bronze nail, 2.3 cm. long.
  - 263. Sherd of Late Helladic  $\Pi Ia$  ware (Winchester). (Pl. CIX. 1.)

Faience scarab of Amenophis III, Type II A. 1a.

- R. 41. 2. 32/264. Bronze ring of Akhenaten, 2.2 cm. high (Manchester).
  - 265. Bronze nail, 5.8 cm. long (Cairo).
  - 266. Bronze fish-hook, 3.5 cm. long (East Anglia).
  - 267. Glazed steatite scarab, 1.1 cm. long (Fitzwilliam). (Pl. CIX. 1.)
  - 273. Bronze ring, 2.3 cm. long (Canford).
  - 274. Fragment of alabaster bowl (Toronto). (Pl. CIX. 1.)

Faience ring of Smenkhkarē, Type I. A. 3a.

# SUMMARY OF UNIMPORTANT OBJECTS FROM THE MAGAZINES BETWEEN THE GREAT TEMPLE AND THE ROYAL ESTATE

- P. 40. 1. This number not assigned.
- P. 40, 2. 33/-. Pottery XII. 1, XIV. 3, XV. 4, XV. 23, XVI. 1.
- P. 41. 1 and 3. 31/608. Fragment of stone lid. 610. Fragment of faience inlay. Ring I. C. 5. Pendants IV. A. 10, IV. B. 11, IV. C. 5, IV. C. 11 (2). Inlay 498. Beads VIII, XIX, XXII (3), XXIV (3), L (3). Pottery IV. 5, VI. 1, VII. 1, XIII. 1, XIII. 8, XIII. 10, XIV. 7, XV. 23 (2), XVI. 1 (2).

- P. 41. 2. 32/-. Rings I. B. 13, I. C. 5. Pendant IV. C. 19. Inlay 458. Beads VIII, XIX, XXIV, XXXII, XLIV, L, LXI. Pottery XV. 6, XVI. 1, XVI. 3.
- Q. 40. 1 and 2. These numbers not assigned.
- Q. 40. 3. 33/-. Ring I. B. 11. Pottery IX. 7, XII. 1, XV. 23 (3), XVI. 1.
- Q. 40. 4. 33/-. Pendants IV. B. 29, IV. C. 10. Mould IV. C. 5. Inlay 542. Beads XXIV (2). Pottery XV. 4, XV. 23 (many), XVI. 1.
- Q. 41. 1. 32/-. Rings I. C. 5, I. C. 41 (2). Pendants IV. C. 6, IV. C. 7, IV. C. 10, IV. C. 11, IV. C. 13a (2). Inlay 459. Beads VI, XIV, XIX, XXII (3), XXIV, XXIX, XXXII, XXXIII, LV (2). Pottery IV. 3, XII. 1, XVI. 1. Many painted sherds.
- Q. 41. 2. 32/-. Beads III, IV, VII, XIX, XXIV. Pottery VII. 2, XII. 1, XV. 3.
- Q. 41. 3. 32/-. Ring I. D. 13. Pendants IV. C. 13a (2). Beads LIV, LV. Pottery II. 5 (2), XV. 23, XVI. 1 (2).
- Q. 41. 4. 32/221. Fragment of alabaster. 239. Ditto. Rings I. B. 14, I. B. 17, I. C. 6. Udat eyes III. B. 4, III. B. 5. Pendants IV. A. 2, IV. C. 8, IV. C. 11, IV. C. 13b, IV. C. 56. Moulds IV. D. 12, 538. Beads I, II, VI, VIII, VIII, XII, XIV, XVIII, XIX, XX, XXII (5), XXIV, XXIX, XXXII (3), XLV, L, LIV. Pottery IV. 3, IV. 8, XVI. 1, XVI. 3. Hair ring.
- Q. 41. 5. No objects.
- Q. 41. 6. 33/-. Pendants IV. A. 10, IV. A. 11, IV. D. 1, IV. D. 10. Mould for ring. 538. Beads XXXVIII, XL.
- Q. 41. 7. 31/-. Rings I. B. 11, I. B. 12, I. C. 5 (4). Pendants IV. B. 20, IV. C. 11, IV. D. 10. Mould IV. B. 20. Beads IV, VIII (4), IX (4), XIX (4), XXII (5), XXIV (7), XXXI (3), XXXII (2). Pottery VI. 1, XIV. 7 (3, two painted), XVI. 1, XVII. 10.
- Q. 41. 8. 32/-. Ring I. C. 5. Pendant IV. B. 20. Beads I, X, XVIII, XIX. Pottery IV. 3, VI. 1.
- Q. 41. 9. 32/-. Rings I. C. 5, I. C. 24. Pendants IV. C. 8, IV. C. 13a, IV. C. 52. Bead XXIV. Pottery IV. 2, IV. 3, IV. 5, XII. 1 (2), XVI. 1.
- Q. 41. 10. 32/-. Rings I. B. 16, I. C. 5. Udat eye III. A. 1. Pendant IV. C. 10. Beads I (2), XI, XIX, XXII (5), XXIV. Pottery IX. 5, XXI. 9. Two hair rings.
- Q. 41. 11. 32/-217. Fragment of faience fish bowl. 219. Fragment of faience plaque. Rings I. B. 4, I. B. 23,
   I. C. 5. Pendants IV. A. 10, IV. B. 18, IV. C. 6 (2), IV. C. 8, IV. C. 13b. Beads I, III, XI, XIV,
   XIX, XXIV (2), XXXII, LXIV. Pottery IV. 8, XII. 1, XV. 3, XV. 4, XV. 22, XVI. 1.
- Q. 41. 12. 33/13. Fragments of bronze. 14. Two bronze rods. Rings I. B. 11, I. B. 23, I. C. 8, I. C. 13. Udat eye III. A. 1. Pendants IV. A. 3, IV. A. 10 (2), IV. C. 6, IV. C. 7, IV. C. 8, IV. C. 10 (2), IV. C. 11, IV. C. 13c, IV. C. 13d, IV. C. 15, IV. D. 2. Beads III, VIII (3), XVIII, XX, XXIII, XXIV (3), XXIX, XXXIII, XXXVIII, XL, XLII, XLIII, XLIV, LII. Pottery XII. 1, XV. 4, XX. 6, XXI. 13. Shell dippers from cellarette.
- Q. 41. 13. 33/18. Pottery figurine of animal. 20. Pottery uraeus. 21. Bronze fragment. 24. Three bronze needles. Pendants IV. C. 12b, IV. C. 18, IV. C. 58. Inlays 481 (2). Beads VIII, XXIV, XXV, XLII. Pottery IX. 1, XV. 1, XV. 4 (many), XV. 23 (many), XVI. 1.
- Q. 41. 14. 32/-. Rings I. C. 5, I. C. 15, I. C. 42. Scarab II. D. 1. Pendants IV. B. 24, IV. C. 6, IV. C. 8, IV. C. 11, IV. C. 16, IV. C. 18, IV. C. 31. Beads VI, VIII, XI, XII, XXII (3), XXIV (7), XXIX, XXXVIII. Pottery III, IV, IX. 5, XIV. 7 (painted), XV. 21.
- R. 41. 1. 32/-. Rings I. C. 5 (2). Scarab II. C. 10. Pendant IV. C. 11. Beads II, VIII, IX, XIV, XVIII, XXVIIId. Pottery IV. 3 (2), IV. 7, XV. 22.

- R. 41. 2. 32/275. Bronze rod. Rings I. C. 32, I. C. 46. Pendants IV. A. 10, IV. C. 8, IV. C. 13b. Inlay 534. Beads VI, XXIV, XXXII, LXII. Pottery XV. 3 (from burial), XVI. 1.
- R. 41. 3. 32/-. Rings I. B. 14, I. C. 11. Scarab II. D. 1. Pendants IV. C. 11, IV. C. 13a. Beads I, XIX, XXIV, XXXII (3). Pottery IV. 9 (2), VII. 2, XIII. 7, XV. 2, XV. 3 (2).
- R. 41. 4. 32/-. Scarab II. D. 1. Pendant IV. C. 56. Beads I, XII, XXIV, XXXII. Pottery VI. 1 (2), XII. 1, XII. 3, XIV. 12, XV. 3 (2), XVI. 3, XX. 1.
- R. 41. 5. 32/-. Ring I. D. 4. Pendant IV. C. 8, IV. C. 13a. Beads XXI, XXXII, XXXIII, XXXV. Pottery XII. 3. Hair ring.
- R. 41. 6. 32/-. Pendants I. C. 1a, I. C. 11, I. C. 49. Inlay 458. Beads VI, XIX (5), XXIV (6), XXXII, L (6). Pottery IV. 3 (2), IV. 7 (2), IV. 8 (2), XIII. 3 (painted), XIII. 10, XV. 2 (painted), XV. 3 (5), XV. 23 (many), XIX. 2.

## CHAPTER VII

## THE RECORDS OFFICE AND ITS SURROUNDINGS

This area falls into two main blocks: that to the north consists of government offices and is itself split up into smaller groups; that to the south is composed of rows of small houses and has been named, with what reason is stated below, the "Clerks' Quarters".

# I. THE GOVERNMENT OFFICES (Pls. XIX, XLVIII. 5-XLIX. 3, and L. 1)

These are for the most part well built, though the sections into which they fall seem to have been erected independently since few of them line up with their neighbours. A feature of the whole area, already noted by Petrie (op. cit. 24), was the number of rough desert stones found on the surface which were inscribed in hieratic with such statements as "The Royal Scribe Ra-apiy. South East Side". Evidently the chief prospective tenants had had the sites of the proposed office blocks marked out as a preliminary by placing inscribed stones at the four corners. If any order was to be maintained in the rush of building it would be essential for the foremen of the gangs to have some easy way of directing the arrival of material, particularly when the various buildings were being erected simultaneously but apparently independently by different contractors—or their ancient equivalent.

# 1. The Foreign Office (Pls. XLVIII. 6-XLIX. 2, LXXX)<sup>2</sup>

This section runs along the west side of the block and consists from north to south of Q. 42. 1, 7, 5, and 21, the latter building being Petrie's No. 19, the Records Office. 1 is very much destroyed. It contains a biggish mud-paved room in the middle with small compartments and stairs to the west. The yard to the north contained rubbish-pits, that to the east five magazines, that to the south three rooms, the central one being provided with brick supports for shelves.

7 (Petrie's No. 18, op. cit. 23) is a fine block of offices (Pl. XLIX. 1). The entrance is from the west. About 3 metres in front of the door is a screen wall, the space between which and the door is paved with brick. The door itself had a stone threshold which shows marks of the swing of the double leaves as well as a slot leading from the pivot-holes where the leaves had been removed when the site was abandoned (cf. C. of A. II, pp. 3, n. 1; 68). This threshold had been plastered and the door had been framed in stone. Within there is a small entrance-hall with a waiting-room to the north. In this room remained one of a pair of column bases (56 cm. with a sunk centre of 26 cm.) apparently in situ though below the level of the brick floor or rather with its top flush with the floor. There is a dais to the west still heavily coated with mud plaster. Two small rooms, perhaps toilet rooms for the convenience of the visitors, open off the north side. East of the entrance-hall is a large room to the north of which lie three long storerooms. From the easternmost of these access is obtained to a small suite of rooms also entered from

<sup>&</sup>lt;sup>1</sup> [For other examples found in our work see Pl. LXXXIX. 128, 129, and p. 162 below.]

<sup>&</sup>lt;sup>2</sup> [For a note on the cuneiform tablets see p. 130 at the end of this chapter.]

the large room above mentioned. This consists of a big room, which from the way in which the bricks of the paving radiate out from a hole in the floor seems to have had a column. In the east end of its north wall is a false door balancing a door in the south-east corner which leads to another storeroom. Other chambers surround the main room. This section gives the impression of being the quarters of some such official as a permanent under-secretary who might spend the night here. To the south is a long brick-paved room, probably open to the sky, which, when excavated, proved to contain a number of later "squatters' walls". To the west of this lies a series of five rooms all with stone thresholds and stone door-jambs, their floors heavily plastered (Pl. XLIX. 1). From the northernmost of these a door in the back wall, now bricked up, gave access to a guard-passage which runs in the thickness of the west wall behind all these rooms (Pl. XLVIII. 6). The south room is on a slightly higher level and steps led up to it. The five rooms to the east do not balance their opposite numbers. The northernmost contains a dais all round the room and apparently seats of honour just inside the door. The next four are all divided into two by screen walls, the inner section of the southern one again having a brick dais all round. The arrangement reminds one irresistibly of a modern government building with an outer office for the typist and an inner office for the chief clerk, while the departmental chief has his own more luxurious office.

5 is entered in the north-west corner. It contains no particular feature of interest except for the sudden thickening of the outer wall in the middle of the east side, no doubt to act as a precaution against theft, though the more normal method is that of an inner guard-passage adopted in 7. Mud-brick walls are much easier to burrow through than are wooden doors to force, and the Greek name for a burglar,  $\tau o\iota \chi \omega \rho \acute{\nu} \chi os$ , shows that the "profession" was well aware of this. The eastern rooms just south of these two are peculiar in that they have been built into the main room leaving a narrow space on either side into one of which at some later date the body of a young man with diseased joints and prominent teeth had been introduced.

21 (Petrie's No. 19, op. cit. p. 23) the Records Office lies at the south end of the block. Its bricks are inscribed "Bureau for the Correspondence of Pharaoh. L. P. H." (Pl. LXXXIII. v and p. 150 below). It has been much ruined owing to the hopes of successive generations that more tablets would come to light. The walls are so broken that it is hard to see where the original entrance was situated and the floors have almost entirely disappeared. The cuneiform tablets were said to have been found in the pit below the level of the floor in the main room to the east. Whether they were hidden there or whether the original floor had collapsed into an earlier rubbish-pit it is hard to say. The rubbish-pits were partly filled with small stones. As far as can be seen the main entrance was from the east by a door now blocked. This gave immediate access to the room in which the tablets were found (Pl. XLIX. 2). In the north-east corner is a flight of stairs. North of this is a room with two ovens. North, again, was a room on a higher level. The original square brick piers of this have been walled up, walls and floor being covered with heavy white plaster.

It is impossible to say whether there was a door communicating with the western half of the building. There is certainly nowadays a break in the wall. Possibly there was none and the

<sup>&</sup>lt;sup>1</sup> Can there have been any hot drink corresponding to the perpetual coffee of modern government offices in the Near East?

only entrance to that section was by a door in the south-west corner. A few fragments of tablets were found in the largest room.

# 2. The House of Life<sup>1</sup>

This block lies to the south-east of the Foreign Office. It comprises Q. 42. 22, 3, 19, 20, 31, 30. The last three buildings have suffered considerable denudation. 22 is a well-built house (Pl. XLIX. 3). It occupies the position claimed by Petrie (op. cit., p. 24) for his No. 21. The plan he gives, however, is not that of the present house. There is a court to the west entered in the south-west corner. A passage leads along the south side of the house and contained a tethering stone bearing the name of the King. The entrance to the house proper is in the north-west corner. No steps lead up to the porch, nor are there any traces of columns in the house, though both the entrance-hall and the central room are big enough to warrant them. The brick paving, however, is unbroken. There is a dais against the south wall of the central room and traces of a hearth in front of it. A large square trough of stone was found in the debris well above floor-level. A fine flight of stairs leads up from the south-west corner. The large bedroom, with the niche to the south, opens directly off the south-east corner of the central room. The house is thus an approach to the "official type" seen at its best in U. 25. 11 of the North City, though it is far smaller. It resembles most the rooms of a don in an Oxford or Cambridge college.

3, though built up against 22, has no direct connexion with it. It is a small house with a courtyard in front with a rubbish-pit containing four store jars of the type XV. 13. There is a lobby, an entrance-hall, and a mud-paved central room with a column base (55 and 28 cm.) which is raised 20 cm. above the floor on a square brick pier. Other rooms lie round it.

The block 19, 20, 31, 30 contains the "House of Life" proper. Both 19 and 20 are built of bricks stamped  $\neg \neg \neg \neg$  (Pl. LXXXIII. vi), 19 in addition having some with the end of a name .......p:-itn. Passages run all round 19, the northern one containing a brick trough built up against the south wall of 22 above described. The entrance to the building proper is from the west. There is an entrance-hall and a central room with others all round it. 20 is much denuded. The small building is entered from the west. To the east is a court containing a big oblong pier of brick nearly in the middle. 30 and 31 are entered from the south. Both consist merely of broken walls and mud paving. 30 seems to have had a veranda along the west side and a few rooms in the north-east and south-east corners. 31 contains an oven and a stone trough, but no sense can be made from the walls.

# 3. The Central Block

This falls into two groups, that to the west consisting of Q. 42, 2, 9, 6, and 4, that to the east consisting of Q. 42, 27, 24, 10, 18B, and 18A.

(a) The Western Group. 2 is a more or less normal house with an entrance-hall to the west and a secondary reception room to the north. The entrance to the central room is screened off

<sup>&</sup>lt;sup>1</sup> Gardiner, JEA. XXIV. 175, shows that this term implies not a university but a scriptorium where sacred books were copied by a staff of scribes. Cf. below, 33/293, fragments of a funerary papyrus from Q. 42. 20. [For the House of Life see now Volten, Demotische Traumdeutung (Analecta Aegyptiaca, III. Copenhagen, 1942), pp. 17-44; cf. also p. 150 below.]

<sup>2</sup> JEA. XVIII, Pl. XV.

by thin walls. The room itself contained a single column (64 and 30 cm.). 9 is almost entirely denuded save for a few broken walls and a patch of mud paving backing on to the south wall of 2. 6 is a typical house of the small type. It has a brick-lined cellarette in its central room. 4 seems to consist entirely of storerooms. Its west wall is broken, but there is no doubt that the entrance, like those of all the buildings in this section, was on this side.

(b) The Eastern Group. 27 is a sizeable house of the ordinary type. The porch is to the north-west and the entrance hall to the north. In the central room are traces of mud-brick paving and of a dais to the west. The secondary reception room which lies to the west contains a plaster-lined bin. The domestic quarters seem to have occupied the east side of the house, though there is no trace of a bedroom with a niche. West of the house is a small area with a tiny garden of which a few tree-stumps survive in the north-west corner. 24 lies to the south of 27. Its walls are much broken, but some building with a brick-lined cellarette lies along the north side. There is a big court to the south with magazines and ovens. 10 is, like the rest, entered from the west. There is first an open court from which the entrance-hall is entered direct. The central room is mud-paved and contained a column base (not  $in \ situ$ ) (52 and 30 cm.). Off the north-east corner of this room are whitewashed closets which may mark the site of bathroom and latrine. A stone trough was found here. 18B has a whitewashed central room with brick paving which shows the position but not the size of the column base. Behind the building to the east and at a slightly higher level are traces of a cobbled pavement as if for a stable. 18A is much ruined but seems to have consisted of a central room with other rooms opening off it all round and stairs in the south-east corner.

# 4. The Eastern Block

This is an irregular block which again falls into two groups, that to the north consisting of Q. 42. 29, 32, 33, 11, 8, and 17 with R. 42. 14 and 15 to the east; that to the south consisting of Q. 42. 16, 14, 13, and 15 with 12 to the east.

- (a) The Northern Group. The bricks of 29 are stamped [.1]. The building has no special characteristics save for a curious thickening of the wall in one of the rooms and a good kitchen to the east (Pl. XLVIII. 5). 32 is of the normal type of house. 33 has several small compartments paved with plaster south of the door. The main room contains two square brick piers and a stone lustration slab or press. To the east are two rooms with brick supports for shelves. In 11 at the east end of the long narrow southern court is a pit containing large slabs of resin. The plan of 8 speaks for itself. 17 consists mainly of a large yard, to the north of which are a few brick-paved rooms one of which seems to have had a sunken lustration slab against the west wall. R. 42. 14 and 15 which lie to the east are too denuded to make sense. 14 contains a brick-lined cellarette. All these houses are entered from the west.
- (b) The Southern Group. 16, which could not be disentangled from 17 (above) at the time of excavation, is merely a yard with a rounded north-west corner and two rooms to the west. 14 is a normal house of the small type with a central room and others opening off it. 13 slopes down to the west, the building proper being to the east. Off the north-east corner of the central room is a steep flight of stairs. In the central room itself is a low partition wall against the east

<sup>&</sup>lt;sup>1</sup> [For the possible significance of these bricks see p. 181 below.]

wall, half a brick high, not unlike that in U. 25. 7 (*JEA*. XVII, Pl. LXXVI). 15 contains nothing of importance. 12 is separated from the main block. It consists merely of a central room with others opening off it.

# 5. The Scattered Houses

These do not line up with any of the main blocks above described. To the east are R. 42. 12 and Q. 42. 25, to the south-east Q. 42. 23 and R. 42. 6 and 7, to the south Q. 42. 26, to the south-west Q. 42. 28, and to the north R. 42. 13.

- (a) Houses to the East. R. 42. 12 is entered from the east and consists of two courts giving on to storerooms. Q. 42. 25 contains bricks stamped Pr-hcy-n-pj-itn. It consists merely of a main room with a pottery hearth in the centre, and two rooms to the east, one of which has a stone threshold. An L-shaped doorstep was found here.
- (b) Houses to the South-east. Q. 42. 23 has a large court to the north where were many pits containing cakes of plaster. The building proper lies in the south-east corner. It is much denuded. R. 42. 6 has bricks stamped Pr-hcy-n-ps-itn<sup>1</sup> like Q. 42. 25 and with, perhaps, slightly more reason for the jubilation of the Aten—an easily pleased deity it seems. Steps lead up to the north end of the west side to a porch from which another door gives on to steps leading down eastwards along the north side. The entrance-hall has a plaster threshold and a mud floor. In it were found fragments of blue painted beams, pink rafters, and the white ceiling, all too fragmentary to be measured. Part of a cavetto from above the door showed blue leaves on a yellow ground. The central room is also paved with mud and has a dais to the east flanked by red niches or false doors. At the west end of the north and south walls are similar niches. The doors were framed in red plaster. The main beam had a block pattern surmounted by a row of black and white and of red and white chequers. Neither the main beam nor the pink rafters show a band of white immediately below the ceiling as is usual. They join the frieze at the top of the wall direct. This consists of white lotuses outlined in black on a blue ground with red blobs. Above this is a chequer pattern similar to that at the top of the main beam. In one of the rooms east of this a brick-lined cellarette runs below the wall into a court. In the court to the north of the building is a water conduit consisting of wine jars of the type XVI. 1 (Pl. L. 1). The bottom of each is broken and fits into the neck of the next. This conduit begins abruptly but runs to a small garden in the north-west corner. R. 42. 7 is merely a court to the south of the last building.
- (c) The House to the South. Q. 42. 26 presents no unusual features. Part of a column base (c. 60 cm. in diameter) was found in the large court to the west.
- (d) The House to the South-west. Q. 42. 28 is peculiar only in having so narrow an entrance and so small an entrance-lobby. Below the central room are a number of earlier rubbish-pits so badly filled that the floor has subsided.
- (e) The House to the North-east. R. 42. 13 is a small house with largish grounds. The house itself consists merely of a main room with other rooms to the south. Along the east side of the house runs a passage. Off this three small workmen's hovels open to the east, consisting of a living-room and two closets. At the south end of this passage there lies to the west (i.e. south of the house) another series of rooms.

#### **OBJECTS**

The numbers in parentheses after the house numbers denote the block in which the house is situated: 1. The Foreign Office; 2. The House of Life; 3. The Central Block, a. West, b. East; 4. The Eastern Block, a. North, b. South; 5. Scattered Houses, a. East, b. South-east, c. South, d. South-west, e. North-east.

### Q. 42.1(1)

- 33/32. Pear-shaped loom weight of limestone, 13.8 cm. high (Cairo).
  - 33. Bronze bowl, possibly brazier, 20 cm. diameter (Ashmolean).
  - 38. Two fragments of decorated limestone (East Anglia).
  - 39. Sherd of Late Helladic IIIa pottery (Museum of Archaeology and Ethnology, Cambridge).
  - 40. Fragment of painted plaster with part of inscription (Cairo).
  - 41. Miniature bronze saw, 4.1 cm. long (Amsterdam).
  - 42. Part of cylindrical mud seal, 3 cm. high.
  - 43. Fragments of painted pottery figurines of Semites, originally about 25 cm. high (Cairo and Ashmolean). (Pl. LXXVII. 4.)

#### Q. 42. 2 (3a)

Faience pendant, cartouche of Akhenaten, Type IV. E. 1.

#### $Q.\ 42.\ 3\ (2)$

- 33/151. Limestone button, 3 cm. diameter.
  - 159. Part of faience kohl tube inscribed with the name of Nefer-neferu-aten-Ta-sherit, 6-6 cm. long (Cairo). (Pl. LXXVIII. 7.)
- 160. Bronze ring engraved with snake between winged uraei, 2·3 cm. long (Cairo). (Pl. LXXVII. 2.) Faience ring of Akhenaten, Type I. A. 2b.

## Q. 42. 4 (3a)

- 33/146. Fragment of limestone inlaid with faience, 5.6 cm. long (Museum of Archaeology and Ethnology, Cambridge). (Pl. LXXVIII. 3.)
  - 147. Carnelian ring of Akhenaten, 1.6 cm. long (Otago).
  - 148. Learner's piece in limestone with  $\bigcirc$ 's, 12 cm. square (Brooklyn).

# Q. 42. 5 (1). No objects of importance.

## Q. 42.6 (3a)

- 33/132. Fragment of faience with Udat eye, 3.2 cm. square (Otago), (Pl. LXXVIII, 3.)
  - 138. Mud doll?, 8.7 cm. high (Cairo).
  - 139. Upper half of clay figurine of woman, 4.6 cm. high (Canford), (Pl. LXXVIII, 3.)
  - 143. Faience uraeus head, 2.6 cm. long.

Faience pendant, cartouche of Akhenaten, Type IV. E. 1.

#### Q.42.7(1)

- 33/129. Faience knob, 5.6 cm. diameter. (Pl. LXXVIII. 3.)
  - 134. Part of bronze knife, 4.6 cm. long.
  - 135. Neck and shoulder of limestone statuette, 18 cm. high.
  - 136. Learner's piece in sandstone with ∅, 8·6 cm. long (East Anglia).
  - 141. Limestone knob, 4.4 cm. diameter.
  - 144. Wreath of leaves, 13 cm. high (Ashmolean). (Pl. LXXVIII. 2.)
  - 145. Leather binding of axe.
  - 149. Part of leather apron (Cairo). (Pl. LXXVIII. 2.)
  - 150. Part of sculptor's trial piece with King's head, 8.8 cm. high (Manchester).
  - 153. Bronze needle, 11.3 cm. long (Cairo).

154. Wooden knob from box with defaced cartouche between crowned uraei, 4.8 cm. diameter (Otago).

Two faience rings of Akhenaten, Types I. A. 2g and I. A. 2i.

Faience pendant, cartouche of Akhenaten, Type IV. E. 1.

Ditto, of Nefertiti, Type IV. E. 4.

Two dittos of Smenkhkarē, Type IV. E. 9.

Petrie (op. cit. 23) mentions alabaster slab with name of Amenophis III.

#### Q. 42. 8 (4a)

- 33/75. Two lapis lazuli dagger pommels inscribed with cartouche of Tuthmosis I, 3 cm. and 2.5 cm. diameter (Cairo and Ashmolean). (Pl. LXXVII. 10.)
  - 81. Faience scarab with Udat eye, 1.6 cm. long.
  - 84. Two fragments of faience (East Anglia).

## Q. 42. 9 (3a)

33/126. Bone weaving tool.

Faience pendant, cartouche of the Aten (early name), Type IV. E. 6.

Q. 42. 10 (3b). No objects of importance.

# Q. 42. 11 (4a)

- 33/89. Glazed steatite scarab with design, 1.6 cm. long (Stepney).
  - 90. Fragment of variegated glass (Cairo).
  - 92. Hawk's head in limestone, 8 cm. long (Cairo).
- Q. 42. 12 (4b). No objects of importance.

#### Q. 42. 13 (4b)

- 33/86. Sketch of girl's head on a sherd, 6.4 cm. high (Ashmolean). (Pl. LXXVIII. 8.)
  - 87. Clay head, 2.2 cm. high (Ashmolean).
  - 88. Lead nail, 2.7 cm. long (Cairo).
  - 102. Faience knob, 5 cm. diameter. (Pl. LXXVIII. 3.)
  - 103. Alabaster finial, 4.4 cm. long (Cairo).
  - 104. Bronze knife, 9.6 cm. long.
  - 109. Limestone mould for amulets, 8.5 cm. high (Cairo).

# Q. 42. 14 (4b)

33/101. Part of pottery figurine of a hunchback, 3·2 cm. high (Ashmolean). Faience ring of Akhenaten, Type I. A. 2b.

## Q. 42. 15 (4b)

- 33/95. Fragment of alabaster ? (Cairo).
  - 96. Sherd of Late Helladic IIIa ware (British Museum).
  - 97. Glazed steatite scarab of Akhenaten, 1.2 cm. long (East Anglia).
  - 98. Broken scarab with name of Tuthmosis I (?).

# Q. 42. 16 (4b) and 17 (4a)

- 33/93. Bronze fish-hook and needle (Cairo).
  - 94. Alabaster finial, 2.9 cm. high.
  - 108. Lentoid weight of green jasper, 2.6 cm. long.

#### Q. 42. 18 (3b)

- 33/122. Fragment of wood with dovetails and dowel holes, 8.9 cm. long.
  - 157. Alabaster weight. Inscriptions inlaid in green paint. On top and weight. Round near the top. Lead inlet in the bottom, 12.4 cm. high (Cairo).

Faience ring of Akhenaten, Type I. A. 2b.

# Q. 42. 19 🗆 🖰 🗆 (2)

- 33/111. Flint saw, 7 cm. long (Cairo).
  - 112. Bronze cutter, 9.2 cm. long (Amsterdam).
  - 123. Bunch of grapes in faience with bronze ring for suspension, 6 cm. high (Cairo). (Pl. LXXVIII. 3.)
  - 125. Fragments of cloth.

# Q. 42. 20 □♀□ (2)

- 33/113. Fragment of incised blue glass, 2 cm. high (Cairo).
  - 293. Fragments of funerary papyrus (Cairo).

# Q. 42. 21. Records Office 1 1 1 1 (1)

- 33/100. Four fragments of cuneiform tablets. (Pl. LXXX, Nos. \*373, \*374, \*375, and p. 130.)
  - 114. Small foot in faience, 1.5 cm. long (Cairo).
  - 117. Fragment of limestone (East Anglia).
  - 127. Five cuneiform tablets. (Pl. LXXX, Nos. \*372, \*376, and p. 130.)
  - 128. Figurine of monkey playing a harp, limestone, 4.9 cm. high (Cairo). (Pl. LXXVIII. 3.)
  - 130. Cuneiform tablet. (Pl. LXXX, No. \*370 and p. 130.)
  - 131. Head of foreigner in pottery, 4.6 cm. high (Ashmolean). (Pl. LXXVIII. 3.)
  - 142. Sherd of Late Helladic IIIa ware (Brooklyn).
  - 196. Figurine of monkey in limestone, 3.3 cm. high (Canford).

Faience ring of Smenkhkarēc, Type I. A. 3a.

Ditto, of Tutankhamun, Type I. A. 4d (Amun name).

Also, found by Petrie: several cuneiform tablets (op. cit. 34); cf. earlier find of cuneiform tablets, Knudtzon, Die El-Amarna-Tafeln.

Group of lion and bull in red jasper said to be from the original find (British Museum).

## Q. 42. 22 (2)

- 33/115. Wooden mallet and wedge (British Museum).
  - 116. Faience lotus, 2.6 cm. high (San Diego). (Pl. LXXVIII. 3.)
  - 119. Flat ivory uraeus head painted red, 4 cm. long (Cairo). (Pl. LXXVIII. 3.)
  - 120. Flint knife, 6.4 cm. long (Museum of Archaeology and Ethnology, Cambridge).
  - 121. Alabaster button, 2.8 cm. diameter (Otago).
  - 155. Stone disk, 6.8 cm. diameter.
  - 158. Wooden kohl stick, 8 cm. long.

Faience ring of Akhenaten, Type I. A. 2g.

Faience pendant, cartouche of the Aten (early name), Type IV. E. 6.

Petrie (op. cit. 24) mentions a fragment of a cuneiform tablet from his No. 21 which is said to occupy this position, though the place given differs totally.

#### Q. 42. 23 (5b)

- 33/176. Sandstone pounder.
  - 177. Limestone loom weight, 8 cm. diameter (East Anglia).
  - 178. Bronze rod, 16 cm. long.
  - 180. Bronze chisel, 6.9 cm. long.
  - 181. Wedge of hard wood with nick in the top, 6 cm. long.
  - 188. Four truncated pyramids of limestone, c. 16 cm. high.
  - 189. Scarab with lion passant, 1.6 cm. long.

#### Q.42.24(3b)

33/71. Two alabaster roundels, 3 cm. diameter.

# Q. 42. 25 🖂 📆 🛣 🍣 (5a)

33/192. Upper half of pottery figurine of woman.

193. Limestone loom weight.

# Q. 42. 26 (5c)

33/194. Bronze rod, 11.2 cm. long (Cairo).

195. Bronze needle, 10-3 cm. long (Cairo).

# Q. 42. 27 (3b)

33/45. Bronze chisel, 7.4 cm. long (Cairo). (Pl. LXXVI. 9.)

46. Pottery spool, 3.3 cm. diameter.

49. Flint knife, 5.2 cm. long.

# Q. 42. 28 (5d)

33/200. Sherd of Late Helladic IIIa ware (Museum of Archaeology and Ethnology, Cambridge).

207. Ditto (Cairo).

208. Uraeus head in faience, 2·3 cm. long. (Pl. LXXVIII. 4.)

Faience pendant, cartouche of the Aten (early name).

# Q. 42. 29 (4a)

33/50. Two bronze knives in a case, 10.5 cm. long (East Anglia). (Pl. LXXVI. 9.)

54. Part of faience kohl tube with King's name, 2.8 cm. long (San Diego).

## Q. 42. 30 (2)

33/203. Bronze needle, 9.9 cm. long (Cairo).

205. Fragment of variegated glass bottle. (Pl. LXXVIII. 4.)

206. Fragment of limestone group of monkeys (Canford).

211. Five sherds of Late Helladic IIIa ware (British Museum).

212. Fragment of large scarab. (Pl. LXXVIII. 4.)

214. Variegated glass bead. (Pl. LXXVIII. 4.)

# Q. 42. 31 (2)

33/215. Sherd of Late Helladic IIIa ware (British Museum).

226. Fragment of bronze chisel.

Faience ring of Akhenaten, Type, I. A. 2a.

## Q. 42. 32 (4a)

33/62. Double wooden lid inlaid, 7.8 cm. long (Cairo).

63. Blue faience uraeus head, 5.5 cm. long (East Anglia).

80. Fragment of alabaster, 6.3 cm. long (Cairo).

# Q. 42. 33 (4a)

33/73. Two bronze needles.

74. Curved fragment of faience with scale pattern, 6.2 cm. high (East Anglia).

85. Sandstone learner's piece with hieroglyphs, 23 cm. high (Ashmolean). (Pl. LXXVIII. 1.)

# R. 42. 6 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ 5b)

33/182. Model of bed in pottery, 6 cm. long.

183. Fragment of painted plaster.

209. Sherd painted with lower part of kneeling figure, 10.6 cm. long (Otago).

210. Inlays of red-painted ivory and faience (Museum of Archaeology and Ethnology, Cambridge). (Pl. LXXVIII. 4.)

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R. 42. 7 (5b)
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33/198. Two alabaster roundels, 3 cm. diameter (Glasgow).

#### R. 42. 12 (5a)

33/173. Fragment of diorite bowl.

174. Two bronze knives, 9.2 and 11.2 cm. long.

175. Pierced wooden kohl stick, 5 cm. long.

Faience ring of the Aten (early name), Type I. A. 7a.

#### R. 42. 13 (5e)

33/64. Faience knob, 5 cm. diameter (Cairo).

- 65. Fragment of leather with paint and resin.
- 66. Two bronze needles (Amsterdam).
- 67. Wooden kohl stick, 5.7 cm. long.
- 68. Alabaster roundel, 2.8 cm. diameter (San Diego).

## R. 42. 14 (4a)

- 33/56. Sherd of Cypriote bowl (Cairo).
  - 57. Rimless alabaster vase, 13.3 cm. high (San Diego).
  - 59. Bronze needle, 10.2 cm. long.
  - 60. Hunting scarab of Amenophis III. Amun name erased, 7 cm. long (Cairo). (Pl. LXXVII. 5, 6.)

# R. 42. 15 (4a). No objects of importance.

# II. THE "CLERKS' HOUSES" (Pls. XX and XLIX. 4)

This group of dwellings, all laid out on the Workmen's Village plan, lies to the south of the Records Office block and overlaps squares Q. 42 and Q. 43. The streets dividing the rows of houses are narrow (Pl. XLIX.4). Many of the houses are much destroyed, a fact which accounts for the objects from several being grouped together on occasion since it was not until they were cleared completely that it was possible to make certain where one house ended and the next began, for unlike the Workmen's Village the houses differ considerably in details. They are badly built, though larger and more pretentious than the archetype. Most of them are whitewashed within.

There is no point in giving wearisome details of each house since, as we say, they conform so completely to type. As can be seen from the plan, some of the numbers apply to courts only. In a great many houses there is a brick-lined cellarette in the central room, a feature not usually met in such houses. The stairs are almost always in this room. No. 20 is rather better built than the rest and boasts two niches or false doors in its central room. From the north-west corner a wall projects which nearly blocks the west end of the street. No. 23 has a closet to the west of the entrance-hall containing a stone trough and remains of a stone slab—presumably the lavatory. In No. 27 there is a similar closet with brick supports for the latrine seat. No. 36 is the best preserved. The central room, which is brick-paved, contains a good stone lustration slab. Below Nos. 38 and 41 are traces of an earlier building some of the bricks of which were stamped with the name of Akhenaten. Its plan cannot be discovered, but it certainly included a brick-lined cellarette which was re-used by the owner of No. 41. No. 40 has two main rooms

<sup>&</sup>lt;sup>1</sup> [See p. 151 below.]

in the centre. That to the west contains a column base (58 and 30 cm.), that to the east a stone trough just inside the door. In the inner rooms of No. 49 are traces of red plaster on the walls. No. 58 has a niche in the north-east corner of the central room. It shares a court with No. 59. No. 61 had a column in its central room, though only a break in the flooring about 50 cm. across shows where it stood. In No. 67 there is no entrance-hall, a lobby leading directly to the central room.

The fact that these houses are all of the "County Council" type shows that they were for the use of government servants or workmen. Since the appointments of the houses as well as the objects found in them are of a class superior to those of the Workmen's Village, and since they lie so close to the Records Office, we are probably justified in seeing in them the residences of the under-clerks employed in the Foreign Office. This idea is strengthened by the discovery of a cuneiform tablet (No. 33/253, Pl. LXXX, No. \*371) in house No. 43.

#### **OBJECTS**

No. 1. 33/222. Fragment of faience plaque, 4·1 cm. high (Brooklyn). (Pl. LXXVIII. 4.) 223. Two sherds of Late Helladic IIIa ware (British Museum). Faience ring of Akhenaten, Type I. A. 2b.

Nos. 2 and 3. 33/197. Fragment of faience inscribed with royal titles, 1·2 cm. high. 199. Top of Late Helladic IIIa stirrup vase (Brooklyn).

190. Ditto (British Museum).

Faience ring of Tutankhaten, Type I. A. 3a.

Nos. 4-8. 33/216. Lead nail, 3·1 cm. long (Cairo).

No. 9. Nothing of importance.

Nos. 10-13. Nothing of importance.

No. 14. 33/238. Two fragments of fluted faience tiles.

 Three fragments of faience (Cairo and Museum of Archaeology and Ethnology, Cambridge).

240. Fragment of stitched leather, 7 cm. long.

248. Fragment of variegated glass bottle showing trace of design, 3.6 cm. long.

Nos. 15 and 16. 33/243. Four sherds from Late Helladic IIIa pilgrim flasks (British Museum). (Pl. CIX. 7.)

Nos. 17 and 18. 33/230. Wooden kohl stick, 12.7 cm. long.

235. Lotus flower in faience for inlay, 2·3 cm. high (Cairo). (Pl. LXXVIII. 4.) Faience ring of Akhenaten, Type I. A. 2b.

No. 19. 33/221. Bronze ring engraved "Living Aten, Lord of Provisions", 2.6 cm. long (Otago). (Pl. LXXVII. 2.)

No. 20. 33/217. Faience ring imitating precious stones set in gold, 2 cm. diameter. 219. Bronze knife, 6.9 cm. long (Amsterdam).

No. 21. 33/225. Faience lid showing fragment of cartouche (Cairo). (Pl. LXXVIII. 4.)

No. 22. 33/234. Two bronze knives stuck together, 11.2 cm. long (Amsterdam).

253. Ditto, 10.9 cm. long (Brooklyn).

No. 23. 33/250. Part of circular wooden box lid carved with frieze of bulls. Gilt plaster flange, 8.5 cm. high (Cairo).

Nos. 24 and 25. No objects of importance.

No. 26.	No objects of importance.
No. 27.	33/231. Fragment of faience, 4.2 cm. high (Cairo). (Pl. LXXVIII. 4.)
No. 28.	No objects of importance.
Nos. 29-31.	No objects of importance.
No. 32.	33/241. Bronze needle, 10 cm. long. 242. Pottery head of animal, 4 cm. long (Canford).
No. 33.	33/270. Gazelle's head in pottery, 10·2 cm. high (Cairo). 294. Alabaster finial, 3·8 cm. high (Otago). 295. Bronze nail, 2·2 cm. long.
No. 34.	No objects of importance.
No. 35.	No objects of importance.
No. 36.	33/255. Sherd of Late Helladic IIIa ware (British Museum). (Pl. CIX. 7.) Faience ring of Akhenaten, Type I. A. 2b.
No. 37.	No objects of importance.
No. 38.	No objects of importance.
No. 39.	No objects of importance.
No. 40.	33/227. Fragment of glass with herringbone design (Cairo). (Pl. LXXVIII. 4.) 228. Fragment of faience fish bowl (Brooklyn). (Pl. LXXVIII. 4.) 229. Piece of wooden slat with pegs, 6 cm. long.
No. 41.	No objects of importance.
No. 42.	<ul><li>33/236. Wooden oar from model boat, 11·9 cm. long (East Anglia).</li><li>237. Fragment of glass with part of Tyi's name.</li><li>Fragment of large scarab of Amenophis III.</li></ul>
No. 43.	<ul> <li>33/251. Bone weaving tool, 11·3 cm. long.</li> <li>252. Sherd of Late Helladic IIIa ware (British Museum). (Pl. CIX. 7.)</li> <li>253. Cuneiform tablet inscribed on both sides, 7 cm. high. (Pl. LXXX, No. *371 and p. 130.)</li> </ul>
No. 44.	33/266. Faience lid, 13 cm. diameter. 267. Pottery head of horse, 8·5 cm. high (Canford).
No. 45.	33/281. Small necklace of beads (LI) and pendants (IV. C. 13b) (Ashmolean). 282. Knob of red jasper, 2·4 cm. (Cairo). Found below a brick. (Pl. LXXVII. 9.) Faience ring of Akhenaten, Type I. A. 2i. Faience scarab of Akhenaten, Type I. A. 2a.
No. 46.	<ul> <li>33/259. Bronze knife, 9·9 cm. long.</li> <li>260. Bronze scissors, 7·1 cm. long (Glasgow).</li> <li>261. Bone weaving tool, 11·4 cm. long (Cairo).</li> <li>262. Small cornice in faience, 4·7 cm. high (Brooklyn). (Pl. LXXVIII. 5.)</li> </ul>
No. 47.	No objects of importance.
No. 48.	No objects of importance.
No. 49.	<ul> <li>33/254. Bone borer, 9·3 cm. long (Cairo).</li> <li>256. Fragments of wooden box lid (Museum of Archaeology and Ethnology, Cambridge). (Pl. LXXVII. 3.)</li> <li>257. Triangular slate slab, pierced at the top, 12 cm. long (Cairo).</li> </ul>

- Nos. 50-2. 33/244. Small hoard of faience rings (very small). I. C. 5 (15), I. D. 14 (15), I. C. 32 (4), I. B. 4, I. D. 13 (Brooklyn, Ashmolean, Fitzwilliam, San Diego). (Pl. LXXVII. 7.)
  - 245. Electrum ring found with last. Swivel bezel with † between udat eyes (Cairo). (Pl. LXXVII. 8.)
- No. 53. 33/247. Bronze knife, 7.5 cm. long (Otago).
- Nos. 54-7. 33/279. Upper part of figurine in limestone of surprised and offended monkey, 6-6 cm. high (Cairo). (Pl. LXXVIII. 5, 6.)
  - 280. Bronze figurine of squatting bull, a weight marked 1 deben, 6 cm. long, 92.9 gr. weight (Glasgow). (Pl. LXXVII. 2.)
- Nos. 58-65. 33/263. Sherd of Late Helladic IIIa ware (Brooklyn). (Pl. CIX. 7.)
  - 264. Fragment of faience wig (Canford).
  - 265. Alabaster roundel, 3·3 cm. diameter.
  - 275. Six fragments of faience plaques.
  - 276. Flint knife, 6.8 cm. long (San Diego).
  - 277. Sherd of Late Helladic IIIa ware. (Pl. CIX. 7.)
  - 278. Bronze chisel, 8.4 cm. long (San Diego).
- Nos. 66-9. 33/283. Knob of box lid in dark blue faience with Akhenaten's cartouches in light blue, 6.8 cm. diameter (Cairo). (Pl. LXXVII. 9.)
  - 284. Sherd of Late Helladic IIIa ware (British Museum). (Pl. CIX. 7.)
- Nos. 70-4. 33/271. Fragment of faience.
  - 272. Ivory chair leg inlaid with green paint, 19 cm. high (Cairo). (Pl. LXXVIII. 5.)
  - 274. Rectangular stone bead, 1.7 cm. long (Cairo).

# SUMMARY OF UNIMPORTANT OBJECTS FROM THE RECORDS OFFICE AND ITS SURROUNDINGS

- Q. 42. 1. 33/31. Bone weaving tool. 34. Bronze needle. 36. Fragment of scarab. 37. Fragment of pottery figurine. Fragment of faience knob. Rings I. C. 2, I. C. 5 (3). Pendants IV. C. 1a, IV. C. 3 (2), IV. C. 7, IV. C. 8, IV. C. 11 (2), IV. C. 15, IV. C. 24. Moulds IV. A. 10, IV. C. 1b, IV. C. 3, IV. C. 6, IV. C. 11, IV. C. 12b, IV. C. 13a, IV. D. 6, 538, V. Inlay 458. Beads VI, VIII (2), X, XIII, XVIII (2), XX, XXII (4), XXIV (3), XXXII (2), XXXV, XLI, LXII (2). Pottery III. 3, IV. 3, VII. 1, XV. 25, XVIII. 3. Neck of XIII. 11 used as jar stand. Two glass rods.
- Q. 42. 2. 33/-. Rings I. C. 5 (2), I. C. 12. Pendant IV. C. 33. Moulds IV. C. 1b, IV. C. 6. Beads XIX (2), XXII (4), XXIV (3), XXXII, XLI, L. Pottery V. 4. Fragments of painted example of group XV, XVI. 1. Two hollow glass rods.
- Q. 42. 3. 33/-. Ring I. C. 5. Pendants IV. C. 3, IV. C. 11, IV. D. 4. Mould for ring. Inlays 456, 458. Beads VI, VIII (2), IX (2), X (3), XIX (4), XXI (2), XXII (3), XXIV (9), XXVII, XXXI (2), XXXII (3), XLI (2), L, LXIV (2). Pottery XV. 13 (4), from rubbish-pit.
- Q. 42. 4. 33/-. Ring I. C. 5. Pendants IV. A. 11, IV. C. 1a, IV. C. 3. Moulds IV. C. 1a, IV. C. 25. Inlay 577. Beads XIX, XXII (2), XXIV (4), XXXII (3), XLVIII, L, LXIV (6). Bronze needle.
- Q. 42. 5. 33/-. Rings I. B. 11, I. C. 3, I. C. 5 (4). Pendants IV. A. 6, IV. C. 6, IV. C. 8, IV. C. 11, IV. C. 19.
   Beads I, VIII, XVIII, XXI, XXIV (2), XXVII, XXXII (2), XLI, XLIII (14), LVII, LXIV.
   Pottery III. 5, VII. 1. Bits of bronze needles.
- Q. 42. 6. 33/133. Fragment of alabaster. Rings I. C. 5, I. C. 21. Pendants IV. C. 3, IV. C. 6 (2), IV. C. 13b, IV. C. 23, IV. C. 27, IV. D. 10. Beads III (2), VIII (4), X (4), XVIII (3), XIX (24), XXI, XXII (6), XXIV (3), XXVI, XXIX (2), XXXI, XXXII (10), XXXIII, XLI (2), XLIII, XLVIII, LVII, LIX, LXIV. Pottery III. 1, XIV. 4 (three painted).

- Q. 42. 7. 33/140. Flint knife. 152. Fragment of faience. Rings I. C. 5 (3), I. C. 11. Pendants IV. B. 6, IV. C. 1a (2), IV. C. 1d, IV. C. 5 (2), IV. C. 8 (2), IV. C. 10, IV. C. 11, IV. C. 13b, IV. C. 19, IV. D. 10 (2), IV. D. 12. Moulds for ring X (2). Inlays 567, 577, 578. Beads I, III, V, VIII (9), IX, X, XVIII (3), XIX (2), XX, XXI, XXII (many), XXIV (9), XXIX (5), XXXI, XXXII (6), XLI, XLIII (2), XLVII, L (2), LIX, LXIV (11), LXIX. Pottery III. 8, IV. 2 (2), XV. 5 (3). Glass rods. Gold leaf.
- Q. 42. 8. 33/82. Bronze fragments. 83. Limestone fragment. 106. Faience fragment. Ring I. B. 4. Pendants IV. C. 8, IV. D. 1, IV. D. 6. Mould for ring. Beads X (2), XVIII, XXIV, XXV, XXVI, XXIX, XXXII, XLVII. Pottery XII. 1, XV. 4, XV. 14, XVI. 1.
- Q. 42. 9. 33/-. Pendants IV. A. 10, IV. B. 11, IV. B. 26, IV. C. 7, IV. C. 8, IV. C. 12a, IV. C. 13a (2).
   Mould for ring. Inlays 458, 517. Beads X, XVIII (4), XIX, XXII, XXIII, XXIV (5), XXXII (2), XLI (3), XLIII, LIX, LXIV. Pottery XV. 7.
- Q. 42. 10. 33/-. Pendant IV. C. 1a. Inlay 447. Hair ring.
- Q. 42. 11. 33/91. Bone weaving tool. 107. Two faience fragments. Ring I. B. 13. Pendants IV. C. 1a, IV. C. 5
   (2), IV. C. 6, IV. D. 6 (2). Moulds 538, 590. Beads I, XIX, XXII (2), XXIV. Pottery XII. 1, XVIII. 3.
- Q. 42. 12. 33/-. Rings I. C. 3, I. C. 5. Scarab II. C. 5. Pendant IV. C. 3. Mould for ring IV. C. 7. Beads VIII, XVIII, XX, XXIV, XXV, XXXII, XXXIII, LIII (2). Pottery XIV. 10.
- Q. 42. 13. 33/105. Fragment of faience. Pendant IV. B. 18. Moulds I. C. 5 (2), IV. C. 7. Inlay 598. Beads VI (2), VII, X, XXIV, XXV, XXXII, XLIII, L. Pottery XIV. 10.
- Q. 42. 14. 33/-. Pendants IV. B. 16, IV. C. 11, IV. C. 13b. Beads X, XVIII, XIX, XXII, XXIV (2), XXXII, XLIII, LI. Pottery VII. 2. Hair ring.
- Q. 42. 15. 33/99. Bronze rod. Rings I. C. 5 (4). Pendants IV. A. 5, IV. C. 3, IV. C. 7, IV. C. 11, IV. D. 1, IV. D. 10. Beads VI, VIII, X, XVIII, XXI (4), XXII (2), XXIV (4), XXIX, XXXII (4), XXXIII, XLIII, XLVIII (2), L. Pottery XIII. 10 (2). Hair ring.
- Q. 42. 16 and 17. 33/-. Rings I. B. 19, I. C. 5 (2). Pendants IV. C. 3, IV. C. 13b, IV. C. 24. Mould IV. C. 13b. Inlay 583. Beads VI, VIII, X (3), XIX (4), XXII (3), XXIV (2), XXV, XXIX, XXXII (2), XLIII (2), XLIX, L (4), LXVIII. Pottery III. 3 (2), XV. 4. Glass rod.
- Q. 42. 18. 33/-. Ring I. C. 5. Pendants IV. B. 18, IV. C. 5 (2), IV. C. 6 (2), IV. C. 11 (2). Moulds for ring VI. Inlays 495, 540. Beads III, V, VI, VIII (3), X (2), XVIII, XIX, XXI, XXII (7), XXIV (3), XXV, XXVI, XXXII, XXXIII, XLIII (2), L (3), LII, LIII, LIV. Pottery (A) VII. 7, (B) XV. 7 (3).
- Q. 42. 19. 33/-. Ring I. B. 10. Pendants IV. A. 10, IV. C. 3, IV. C. 11 (2), IV. C. 13d, IV. D. 1. Moulds IV. C. 1a, IV. C. 10. Inlays 534, 595. Beads III (2), VI, VIII, X (3), XVIII (4), XIX (4), XXII, XXIII (2), XXIV (11), XXV, XXXII (6), XXXIII, XL, XLI, XLIX, L, LVI, LIX. Pottery XIII. 15 (painted), XVI. 1.
- Q. 42. 20. 33/-. Pendants IV. D. 6 (2). Inlays 572, 592, 595. Beads VIII, XVIII, XXIV, XXIX, XXXIII.
- Q. 42. 21. 33/-. Rings I. C. 3, I. C. 5, I. C. 23, I. C. 60. Pendants IV. A. 3, IV. A. 11, IV. B. 18, IV. C. 6, IV. C. 11, IV. C. 12a, IV. C. 19, IV. D. 6. Inlays 577, 591. Beads VI, VIII (3), IX (2), X, XVIII (7), XXII (3), XXIV (7), XXV (2), XXIX, XXXII (6), XXXVIII (2), XXXIX, XLI (4), XLIII, XLVIII, L, LXIV. Pottery III. 1, VII. 1, IX. 8, IX. 14, XV. 4 (several), XV. 6, XV. 22, XVI. 1. Two hair rings.
- Q. 42. 22. 33/-. Ring I. B. 2. Pendants IV. A. 10, IV. B. 29, IV. C. 1a, IV. C. 8 (2), IV. C. 11, IV. C. 58, IV. D. 6 (2), IV. D. 10 (2). Inlays 482, 592. Beads VI (2), VII, VIII (13), IX, X, XVIII (17), XIX (18), XXII (14), XXIV (28), XXV (2), XXVI, XXVII, XXXI, XXXII (10), XXXIII, XLI (5), XLIII (4), XLVII (3), L (2), LVII, LXIV. Pottery XV. 6.

- Q. 42. 23. 33/179. Bronze fragment. Ring I. C. 5. Udat eye III. A. 1. Pendants IV. C. 1a, IV. C. 3 (2), IV. C. 13a. Beads III, VI, VIII (3), IX, XXII (3), XXIV (4), XXVI, XXVII, XXXI (2), XXXIII (4), XLVII, L. Pottery XIV. 10 (2, one painted).
- Q. 42. 24. 33/72. Bone skewer. Pendants IV. C. 11 (4), IV. C. 41. Moulds IV. C. 11, 591. Beads I, VI, VIII (5), XVIII, XXIV (2), XXVI, XXIX, XXXII, XLIII.
- Q. 42. 25. 33/-. Rings I. C. 5 (2), I. C. 12. Pendants IV. A. 10, IV. A. 11, IV. C. 3, IV. C. 11, IV. C. 18a, IV. C. 19, IV. D. 16 (2). Inlays 448, 458. Beads I (2), IV (4), VIII (2), X (3), XVIII (2), XXII (16), XXIV, XXVII, XXIX (2), XXXII (11), XLVIII, L (2), LIX. Pottery VII. 2, XV. 2. Fragments of faience, glass, and bronze.
- Q. 42. 26. 33/-. Ring I. C. 5. Udat eye III. A. 1. Pendant IV. C. 8. Beads X (2), XIV, XIX (2), XXXI (6), XXXII (4). Pottery XV. 15, XVI. 1.
- Q. 42. 27. 33/-. Rings I. C. 5 (2). Pendants IV. C. 1, IV. C. 6, IV. C. 10, IV. C. 13a, IV. C. 13c, IV. C. 15.
   Moulds for hair ring IV. C. 13d, 540. Inlays 448, 478, 535. Beads IV, VIII (3), X, XX, XXII (4), XXIV (17), XXIX, XXXIII (many), XLI, XLIII (3), XLVII, L, LXII (many).
- Q. 42. 28. 33/201. Fragment of leather. 202. Fragment of alabaster. Pendants IV. C. 1a, IV. C. 1b, IV. C. 7, IV. C. 11, IV. C. 12a, IV. C. 19. Inlays 430, 458, 483, 538. Beads VI, VIII (3), X, XIV, XVIII, XIX (2), XXII, XXIV (4), XXIX, XXXI, XXXII, XLI, LV. Pottery XVI. 1 (2). Two glass rods.
- Q. 42. 29. 33/-. Rings I. B. 26, I. C. 5. Pendants IV. A. 7, IV. B. 9, IV. C. 2b, IV. C. 6, IV. C. 8, IV. C. 16, IV. D. 6. Moulds IV. C. 13b, L. Beads IV, VI, VII, VIII, XIX, XXI, XXII, XXIV, XXVI, XXXII, XXXIII (many), XLIII (2), L (4). Pottery VII. 1, XIII. 14, XIV. 6, XVI. 1. Three glass rods.
- Q. 42. 30. 33/204. Fragment of wood. 213. Fragment of faience. Rings I. C. 5, I. D. 4. Scarab II. D. 3. Pendants IV. B. 2, IV. C. 3, IV. C. 6, IV. C. 20, IV. D. 6. Inlay 452. Beads V, X (2), XVIII, XIX, XXII (4), XXIV (5), XXV (5), XXIX (2), XXXI (4), XXXII (6), XLI, XLIX, LI. Pottery XII. 1, XV. 20.
- Q. 42. 31. 33/-. Ring I. C. 4. Scarab II. C. 3. Pendants IV. C. 3, IV. C. 13b. Beads I, XVIII, XXIV, XXVII, XXXII (3). Pottery XIII. 13.
- Q. 42. 32. 33/79. Two bronze rods. Pendants IV. A. 5, IV. A. 11. Moulds IV. C. 8, IV. D. 4. Beads III, VIII (2), XVIII, XIX (2), XXII (6), XXIV, XXV, XXVI, XXXII, XXXVIII, XLIII. Pottery XIV. 8, XVII. 2. Two glass rods.
- Q. 42. 33. 33/-. Rings I. B. 4, I. C. 5. Pendants IV. C. 8, IV. C. 13b, IV. C. 24 (2), IV. D. 6. Beads VIII (2), X (2), XXIV (3), XXVII, XXIX (2), XXXII (2), XLIII (2). Pottery XII. 1, XV. 6. Glass rod.
- R. 42. 6. 33/-. Rings I. C. 5 (2), I. C. 13, I. C. 15. Pendants IV. C. 18 (2). Beads XXII (12), XXIV (3), XXXI (2), XXXII. Pottery III. 1, XIII. 7 (3), XIV. 5, XIV. 8, XVI. 1.
- R. 42. 7. 33/-. Rings I. B. 13, I. C. 5 (many), I. C. 13. Pendants IV. C. 8, IV. C. 9. Moulds for hair ring I. C. 5. Beads XIX, XXIV, XXXII (7), XL. Pottery XIII. 10 (painted), XVI. 1. Many glass rods.
- R. 42. 12. 33/-. Rings I. C. 52, I. D. 10. Pendants IV. C. 3, IV. D. 6 (3). Beads III, X (2), XVIII, XIX, XXIV (2), XXVI, XLVII, XLIX. Pottery XV. 6, XVI. 1. Ivory rod.
- R. 42. 13. 33/-. Rings I. C. 5 (several), I. C. 26, I. D. 32. Pendants IV. B. 4, IV. B. 18, IV. C. 3, IV. C. 13b (2), IV. D. 12. Beads I (2), VI, VII, VIII (3), X (3), XVIII (4), XIX, XXIV, XXV (4), XXVI, XXIX, XXXII (3), XLI (2), XLVIII (2), LIX. Pottery III. 3, IX. 7, XX. 5 (2), XX. 11. Bone roundel. Glass rod.

- R. 42. 14. 33/55. Six limestone whorls. 58. Part of pottery figurine. 61. Fragment of limestone stamp. Pendants IV. B. 13, IV. B. 20, IV. C. 7 (2), IV. C. 11. Mould for ring. Beads VI, XIX (7), XXII, XXIV (2), XXV, XXVI, XXXI, XXXII, XXXIV, XXXV, XLI (2), XLIII (3). Four glass rods.
- R. 42. 15a. 33/-. Ring I. C. 5. Pendants IV. C. 8, IV. C. 11, IV. C. 48. Beads VIII. X, XXI, XXII, XXXI, XXII, XXXI, XXIII. Pottery XVI. 1 (several). Gold leaf.

# CLERKS' HOUSES

- No. 1.
   33/224. Fragment of faience. Rings I. B. 2, I. C. 5, I. C. 26. Pendants IV. A. 11, IV. B. 18, IV. C. 1a, IV. C. 3 (2), IV. C. 5 (2), IV. C. 13a, IV. C. 19. Mould for ring. Beads IV, VIII (3), XIX, XXII, XXIV (2), XXV, XXVII, XXXI, XXXII, XLI (2), XLIII, XLVIII, XLIX, L. Glass rod.
- Nos. 2 and 3. 33/-. Rings I. B. 11, I. C. 5, I. C. 22. Pendants IV. C. 1d, IV. C. 3, IV. C. 5, IV. C. 13a, IV. C. 19, IV. C. 50, IV. D. 10. Inlays 456, 481, 517. Beads VI, VIII (4), IX (6), X, XVIII, XIX (3), XXII (8), XXIV (9), XXV, XXVI, XXVIIIa, XXIX, XXXI, XXXII (8), XXXIII (2), XLVII, L. Pottery III. 3. Glass rod. Fragment of faience uraeus head.
- Nos. 4-8. 33/-. Rings I. C. 5 (several), I. C. 12. Pendants IV. C. 3, IV. C. 12a. Beads I, X (5), XVIII (2), XXI (3), XXXII (4), XLI, LII. Pottery XV. 6 (painted), XVI. 1.
- No. 9. 33/-. Pendants IV. B. 20, IV. C. 13a, IV. D. 10. Inlay 496. Beads X, XXII (2), XXXII (6).
- Nos. 10-13. 33/-. Rings I. B. 11, I. C. 5. Scarab II. D. 1. Pendants IV. C. 1a, IV. D. 6. Inlay 595. Beads VI, X, XXII (13), XXIV, XXXI, XXXII (4), XLI (2), LII (2), LIII.
- No. 14. 33/-. Ring I. C. 5. Pendants IV. C. 7, IV. C. 13a, IV. C. 13d. Mould V. Beads XXII (3), XXIV, XXXI (2), XXXII (2), XLIII, XLVII. Hair ring.
- Nos. 15 and 16. 33/-. Rings I. C. 5 (3). Pendants IV. B. 18, IV. C. 11. Beads X, XXII, XXV, XXIX, XXXII, L.
- Nos. 17 and 18. 33/-. Pendant IV. C. 13d. Inlays 481, 584. Beads XXII, XXXII, XXXII, XLIII (2), L, LI. Glass rods.
- No. 19. 33/-. Rings I. C. 29, I. C. 57. Pendant IV. C. 3. Inlay 595. Beads XXIV, XXXI, XXXII (2), XLIII.
- No. 20.
   33/218. Fragment of faience. 220. Ditto. Rings I. C. 5, I. C. 6. Pendants IV. C. 8, IV. C. 11, IV. D. 16. Inlays 590, 591. Beads III, X, XVIII, XIX (2), XXIV (2), XXVII, XXXII (2), XLI, XLIX, LVI (2), LIX (2), LXIV. Glass rods.
- No. 21. 33/-. Rings I. B. 11, I. C. 3. Scarab II. C. 3. Pendant IV. D. 10. Beads VIII, XXXII (2), XLVII, XLIX.
- No. 22. 33/-. Ring I. B. 17. Pendants IV. C. 3, IV. C. 8. Beads VIII, XVIII, XIX, XXII (2), XXXI, XXXII (3), XLI.
- No. 23. 33/-. Ring I. C. 5. Pendant IV. C. 11. Beads VII, XI, XXIV, XXXI. Pottery XV. 2 (painted).
- Nos. 24 and 25. 33/-. Ring I. C. 5. Pendants IV. B. 18, IV. C. 7, IV. C. 11. Beads X, XVIII, XXII, XXIV, XXXII, XL.
- No. 26. 33/-. Beads X, XXVIIIb, XLIX, LIX.
- No. 27. 33/-. Ring I. C. 5. Pendants IV. C. 11, IV. C. 12a, IV. C. 17, IV. D. 6. Inlay 458. Beads I, XXIV (2).
- No. 28. 33/-. Inlay 458.

- Nos. 29-31. 33/-. Ring I. C. 5. Beads XXIV, XXXII. Pottery III. 1, XIV. 8 (both in No. 30).
- No. 32. 33/-. Rings I. B. 11, I. C. 5 (2), I. D. 13. Beads XXIV, XXXII (3), XXXIII (3). Pottery XIV. 4 (painted). Glass rod.
- No. 33. 33/-. Ring I. C. 5. Pendant IV. A. 10. Beads VIII, XIX, XXII, XL.
- No. 34. 33/-. Ring I. C. 5. Beads VIII, XXIV. Pottery XV. 6.
- No. 35. 33/-. Ring I. B. 4. Pendants IV. C. 3, IV. C. 11 (2), IV. D. 10. Inlay 595. Beads III, XXIV (2), XLIII (3), L. Pottery XVI. 1. Glass rod.
- No. 36. 33/-. Ring I. C. 5. Pendants IV. B. 18, IV. B. 20, IV. C. 4, IV. D. 4. Inlay 458. Beads I, VI, VII, X, XIX, XXII, XXIV (3), XXIX, XXXII, XL. Pottery III. 1.
- No. 37. 33/-. Ring I. C. 5. Pendants IV. C. 3, IV. D. 4. Beads XIX, XXII, XXV, XXVII.
- No. 38. 33/-. Ring I. B. 11. Mould IV. C. 10. Inlay 458. Beads V, XVIII, XXIV (2), XXXII, XLVII, L.
- No. 39. 33/-. Beads III, VI.
- No. 40. 33/-. Pendants IV. C. 5, IV. C. 16. Inlay 456. Beads IV, XXII, XXV, XXXII (3). Two glass rods.
- No. 41. 33/232. Fragment of bronze. 233. Ditto. Rings I. B. 17, I. C. 5, I. C. 39. Inlay 498. Beads VIII, XXII (4), XXIV, XXXII (2).
- No. 42. 33/-. Rings I. C. 5, I. C. 27, I. D. 14. Beads VIII, XVIII (2), XXIV (2), XXXII (4), XLI, XLVII, XLVIII.
- No. 44. 33/-. Rings I. C. 5 (4), I. C. 11 (2). Pendants IV. C. 8, IV. D. 6, IV. D. 7. Beads VIII (2), XVIII (4), XIX (2), XXIV, XXV (2), XXXI, XXXII, XLI, XLIII, L, LXIV.
- No. 45.

  33/269. Faience lid. Rings I. C. 5, I. C. 27. Scarab II. C. 3. Pendants IV. C. 1c, IV. C. 4, IV. C. 7 (2), IV. C. 11, IV. C. 13a, IV. C. 13b. Inlay 456. Beads VIII (2), X, XVIII (3), XIX (2), XXII (9), XXIV (8), XXV (2), XXVI, XXIX (2), XXXII (4), XXXIII (5), XLI, XLIII (2), XLVII, XLVIII (3), L, LVI, LXI (2), LXIV (2), LXVIII.
- No. 46. 33/263. Two fragments of wood. Rings I. C. 5, I. D. 32. Pendants IV. C. 13a, IV. C. 13d. Beads XVIII, XXIV, XXIX, XXXII. Glass rod.
- No. 47. 33/-. Rings I. C. 5 (2). Beads VI, XXXI. Glass rod.
- No. 48. 33/-. Beads I, XXIV, XXXII.
- No. 49. 33/-. Ring I. C. 5. Pendants IV. C. 3, IV. D. 10. Inlay 481. Beads XIX, XXIV, XXXII. Pottery XV. 5.
- Nos. 50-2. 33/-. Ring I. C. 5. Pendant IV. A. 13. Inlay 491. Beads I, XXII (3), XXIV, XXXII (2), XLI. Two glass rods.
- No. 53. 33/-. Ring I. C. 5. Beads VII, X, XIX, XXII, XXV, XXXI, L.
- Nos. 54-7. 33/-. Rings I. B. 11, I. C. 57. Pendants IV. B. 30, IV. C. 12a, IV. D. 10. Mould for ring. Inlay 595. Beads VIII, XVIII (2), XIX, XXII (2), XXIV, XXIX, XXXII (4). Fragment of hornblende porphyry.
- Nos. 58-65.

  33/-. Rings I. C. 5, I. C. 14, I. C. 26, I. C. 27. Udat eye III. B. 5. Pendants IV. A. 10, IV. B. 18, IV. C. 1a, IV. C. 3, IV. C. 8, IV. C. 10 (2), IV. C. 11, IV. C. 13a, IV. C. 13b. Inlays 559, 592. Beads VIII (2), IX, X, XIX, XXIII (3), XXIV (3), XXXI, XXXII (6), XXXVI, XLVII, XLVIII, XLIX (3), L, LI. Pottery XVI. 1 (from No. 58).

- Nos. 66-9. 33/-. Rings I. C. 5, I. C. 11. Scarab II. C. 5. Inlays 481, 588. Beads VI, VIII, XXII, XXIV, XXVII, XXXI, XLIII, LXIV, LXVIII.
- Nos. 70-4. 33/273. Two alabaster fragments. Rings I. C. 5 (2), I. D. 13. Scarab II. C. 5. Pendants IV. B. 14, IV. C. 11, IV. C. 13c, IV. C. 23. Mould for ring. Beads V, VIII (4), X (2), XVIII (2), XIX, XXII (4), XXIV (3), XXV, XXXI (2), XXXII (7), XXXIV, XLIII (2), XLVIII, L, LI, LII, LXVIII. Pottery XV. 6 (2) (from No. 73).

# **[A NOTE ON THE CUNEIFORM TABLETS**

It had been Mr. Pendlebury's intention that Dr. Cyrus H. Gordon's final report on the cuneiform tablets found in the Records Office (pp. 115, 120, above) and Clerks' House, No. 43 (pp. 123, 124, above), should be published as a separate chapter in this memoir. Owing to the unavoidable delays caused by the War and the uncertainty about the appearance of this volume, it was agreed that Dr. Gordon's report should be published separately. It has now appeared as an article entitled "The New Amarna Tablets" in *Orientalia*, XVI (1947), 1–21, Pls. I, II.<sup>1</sup>

No useful purpose would be served by reprinting Dr. Gordon's report in extenso, but for the benefit of those who may wish to have all the material under one cover we print photographs of the more important fragments (Pl. LXXX) and add a summary of the contents based on Dr. Gordon's paper. The numbering of the fragments is that of Dr. Gordon, Nos. \*370–\*377 corresponding to Nos. A–H in his preliminary report. No. \*371 was found in Clerks' House No. 43; all the other tablets were found in the Records Office, Q. 42. 21.

- \*370 (= 33/130). Copy of a letter addressed by Pharaoh to Itiya,<sup>2</sup> governor of Ascalon, on the occasion of the appointment of a new Egyptian commissioner to that city.
- \*371 (= 33/253). Portion of a letter from a Syrian chieftain to Pharaoh; the opening and concluding sections are missing. Gordon suggests this may be a letter from Abdi-Aširta to Amenophis III dealing with the incident recorded in Knudtzon, op. cit., No. 62.
  - \*372 (=33/127c). Fragment of a letter.
- \*373 (=33/100a and c). Fragment of a vocabulary. The lower piece bears some illegible hieratic signs, apparently added after the tablet had been broken.
- \*374 ( = 33/100d). The right-hand section of each face contains a list of gods. The section on the left is too fragmentary to read.
- \*375 (=33/100b). The obverse was perhaps intended for a vocabulary. The reverse probably bears an extract from the Šar Tamhari epic, celebrating the exploits of Sargon of Accad in Cappadocia.
  - \*376 (=33/127a). Perhaps a fragment of a literary school text.
- \*377 ( = 33/127: no photo, but for a drawing see *Orientalia*, XVI, 21). Probably part of a school text.]

<sup>&</sup>lt;sup>1</sup> [A brief preliminary report by Dr. Gordon was printed in JEA. XX. 137-8.]

<sup>&</sup>lt;sup>2</sup> [Identified by Gordon with Witiya, governor of Ascalon, seven of whose letters are known (Knudtzon, *Die El-Amarna-Tafeln*, Nos. 320-6).]

## CHAPTER VIII

## THE MILITARY AND POLICE QUARTERS

This group falls into three main blocks (Pls. XXI, LII. 1). To the west is a rectangular building comprising R. 42. 1, 2, 3, 4, 5, and 11. East of this is a long narrow series of buildings extending a considerable way south and comprising R. 42. 8 and 9. From the north end of this R. 42. 10 projects eastwards.

Though each of these blocks is independent, R. 42. 10 indeed having no direct access to any of the others, they all give the impression of being built for the same purpose. R. 42. 10, as we shall see, must certainly have been a barracks. We suggest below that it was a police barracks. R. 42. 8 and 9 were certainly built for the housing of a large number of men, and in the southern half of this block was an important public building—we suggest the War Office or the *Sirdariya* of General Ramose or another. R. 42. 1–5 and 11 seems to be more closely connected with the latter than with any other building, and is therefore included in the group.

- 1. The Magazines R. 42. 1, 2, 3, 4, 5, and 11 (Pl. L. 2). The entrance is in the centre of the east wall. It had a stone threshold and door-jambs of red plaster. A block of limestone bearing part of the cartouches of Akhenaten and Nefertiti was found near by. The entrance, which has a porter's lodge inside to the south, leads to an open court, 5, in which the only building is a long room in the north-east corner. North of this is 3, which has a central passage containing two rows of seven square brick piers. To the west of this are six, to the east seven, magazines. At the north end is a small open court. South of 5 lies 2. This consists of a large barn with six rows of five square brick piers. At the west side of this is a long pit lined with stone or preserving the plaster bedding for it. To the south are six whitewashed magazines and a large room with two square brick piers to which partition walls run dividing the room into three aisles. There are bins plastered white and some fire-places against the south wall. Along the west side of the block is a big open court, 4, in which were found fragments of a wooden beam covered with painted plaster showing an ordinary block-pattern. At the south end of this is a small building, 1 (Pl. L. 2). This consists of a mud-paved room to the west containing two cupboards on the south side. Next comes a brick-paved room with two ovens, a bread-rack, and a kneading slab with a plaster ring in the middle. In the south-east corner is a small stone slab with a pivot-hole for a cupboard door. There are more brick-paved compartments to the north, one of which contains two brick bins with holes in the bottom of their sides. In these were found fragments of plaster inscribed in hieratic. In the south-west corner of the block are the few broken walls labelled 11.
- 2. The Military Quarters. R. 42. 8 and 9 (Pls. L. 3-LI. 5). R. 42. 8 lies to the north. It is entered from the west. The gate has gone but the porter's lodge survives. The western section consists of a garden with rows of trees. From this a door leads eastwards to a room with two rows of six square brick piers, engaged piers or antae being built on the side walls. East of this is a room with four rows of three piers. North lies an open court with a veranda along the south wall. To the east of this are six magazines and a flight of steps fronted by a veranda. To the

south of the central division are two more rooms with whitewashed piers. The eastern of these has a plastered dais against the south wall.

R. 42. 9 is divided into five main portions, the communications between which are not always easy to determine. A. The northern section is entered by a fine gateway from the west with a porter's lodge to the south. It is almost identical in plan with R. 42. 8, having a garden in front, a room with traces of square piers beyond, and seven magazines and a flight of stairs to the east. Along the south side of this section is a long passage in which was found a large unfinished column base of limestone 1.10 metres in diameter. B. Next to the south is a court containing eleven corn-bins of brick (Pl. L. 3). Under two of them is an earlier pit containing the bones of oxen. In the middle of the court is a round stone trough. Next comes an open court from which a passage leads to seven magazines and a flight of stairs against the east wall. C. The north-west corner of this section consists of an open court containing rubbish-pits. À passage leads south and then west from this court to five magazines. Below three of these is a gigantic rubbish-pit filled with vases (Pl. LI. 1). This pit is divided into two by a rough wall of mixed brick and stone. In the easternmost of the magazines is a curious stone slab with two sloping depressions (Pl. LI. 2), perhaps some kind of a press. South of the passage are four rooms. Three of these contain ovens which are in an excellent state of preservation. The east side of this section is taken up with rooms containing square piers. By the south wall of one of these was a Roman burial of a woman, 1.52 metres tall, lying supine with her hands over her pelvis, in a coffin of plastered wood. D. The next section has a garden to the west with a small building in the centre. To the east of this is a room containing three rows of fifteen rough stone vases sunk in the ground (Pl. L. 4). Down the centre are traces of square piers. East of this is a passage off the north side of which open four magazines. In all of these are long low racks. The second from the east contained another burial exactly similar to that already described. E. This is the most important section of the building and is clearly a public building, perhaps the War Office. There is a large gateway at the west end with a postern to the north. Within is a lobby containing two circular piers of specially made bricks. From this a passage runs northwards and serves a small building. This passage continues round the north, east, and south sides of the block. In its southern extension are a number of ovens. East of the entrance-lobby is an open court flanked by others. The mud paving of these is practically destroyed. East of these is a brick-paved hall (Pl. LI. 3). The central aisle of this is flanked on each side by five circular pillars of brick behind which are five rows of three square piers. All are whitewashed. A door from this leads into an open brick-paved court surrounded by whitewashed square piers (Pl. LI. 4 and 5). The court is sunk in the centre and the kerb is formed of bricks set on edge. Many fragments of painted plaster from the pink beams and rafters were found. The largest fragment must have come from the architrave and was 35 cm. deep with no trace of the white band which comes immediately below the ceiling. To north and south are magazines. Two of those to the north contain fire-places. In the eastern one of the southern group was a flight of stairs, the entrance to which had been blocked up.

This whole arrangement is unique at Amarna. It looks like nothing so much as the peristyle and impluvium of a Roman villa, or, to make a comparison nearer in date, the peristyles found at Agia Triadha and Phaistos in South Crete of Late Minoan I times.

3. The Police Barracks. R. 42. 10 (Pls. LII-LIV). These lie at the extreme eastern edge of the city commanding an admirable view of the whole plain, so that any criminal making a

break for the High Desert would quickly be spotted. Furthermore, as we can say from personal experience, the surface of the desert hereabouts offers an admirable ground for galloping, so that should a disturbance break out in any part of the city it would be possible to reach the point nearest to it very quickly before turning in to traverse the narrow winding lanes.

One strange coincidence deserves notice. The season after the excavation of this building a member of the staff taking a walk towards the High Desert suddenly noticed, about half a mile to the east, a neat row of mangers similar to those described below, complete with tethering stones. This had clearly not been the scene of a casual excavation by the villagers. It was too tidy and there was no dump of sand. Eventually it appeared that a troop of the Frontier Camel Patrol had stopped here for some days during the previous summer and had unwittingly made an encampment of a nature precisely similar to, though simpler than, that of their predecessors over 3,000 years before.

The main entrance to R. 42. 10 is from the north between heavy pylon towers. Immediately within these were fragments of a stone lintel bearing the Aten name in its early form, that of the King, part of a kneeling figure, and the plumes on the top of horses' heads. Within this entrance is a large parade ground. This had originally a well in the centre to which a flight of mud-brick steps descended (Pl. LII. 2-4). At some period the whole of this court has been dug out into a gigantic pit, the resulting virgin sand being thrown in great mounds over the surround walls. When this was done we do not know. At all events the walls had already fallen, for stretches were found lying on the original floor. The only conceivable explanation is that it is the work of treasure-seekers. But it is a gigantic piece of work and the site is not one to attract such. At first glance the resulting pit is comparable to that which lies to the north. The latter, however, was clearly dug out for the sand-filling and scaffolding required for the Palace, to which a street runs directly from it. In any case it is inconceivable that an important part of an important public building should be so wrecked when equal and better facilities lie close by.

Part of the parade ground still retains the original mud paving. On three sides were mangers and tethering stones and on the fourth a low wall lay about 75 cm. north of the main wall and the intervening space had clearly been lined to provide a trough for watering the horses. Thus a "flying squad" could be kept in perpetual readiness for an emergency. In the south-west corner of the parade ground is a small house entered from the north. There seems to have been a column in the entrance-lobby. From the entrance-hall a stone threshold leads into the central room which is mud-paved and contains a column base 31 cm. in diameter. In the south-east corner of the parade ground is a room with very broken walls. From this came fragments of stone door-jambs bearing the early Aten name.

To the east of this parade ground and along the south side is a court. Into the north side of this six long stables have been introduced at a slight angle (Pl. LIII. 1–3). The southern one has a brick-lined cellarette near the entrance. The rest have cobbled floors, mangers, and tethering stones. They are extremely narrow, and even allowing for the small horses of the period (probably, according to Tut'ankhamūn's chariot, not more than 11½ hands), it cannot have been a pleasant job to fill the far mangers if the horses were at all restive. The cobbled pavement is sloped at intervals down to troughs where the urine would collect. The rest of the original court is bare except for a few ovens in the north-east corner.

<sup>&</sup>lt;sup>1</sup> We were eventually reduced to attributing it to Petrie (cf. op. cit. 22)—most unjustly.

This eastern section is clearly devoted to the horses, chariots, and grooms on duty, with a small house for the farrier-sergeant. The central section contains the quarters of the personnel. This part is accessible via a big gate on the west side of the parade ground. Entering from the parade ground one comes into an open court containing two corn-bins. To west and south of this court are long rooms paved with brick and entered over stone thresholds. Some of those to the west seem to be merely passages, but those to the south, from the many fragments of leather collars found in them (Pl. LXXVIII. 11), are clearly the "dormitories". South of these latter is a corridor connecting with the east court.

The western section is entered by a door in the west wall of the whole block. To the north of this are magazines. The court within the entrance also gives access to a small private house which must be that of the Commandant (Pl. LIII. 4). Dare we suggest Maḥu? This house has shallow steps leading up to a porch. Behind this is a lobby. On the west side of the house is an entrance-hall, the roof supported on two columns (bases 55 cm. in diameter supporting columns 30 cm. at the bottom). To the north of this are two store-closets. The Central Hall has a hole for a single column and fragments of a painted stone lintel from over the entrance. To the north are two rooms, to the south one room and a staircase. East of the Central Hall is the inner sitting-room, the door to which was blocked. This had one column (57 and 26 cm. with a red painted cross for the centre). In it were found the painted jar stops (Pls. LXXIX. 2; LXXXII. 104), the wine jars still containing the lees of the wine (see Ch. XIII, pp. 239 ff.) and a number of mud sealings (see below, Ch. X, and Pls. LXXXI-LXXXIII, Nos. 10, 72, 104, 112, 113, 132, 133). To the north is a closet with brick supports for shelves. To the south is a bedroom with the bed-niche to the east. The whole house is paved in brick, the stairs and the inner rooms having specially made slabs  $35 \times 38.5$  cm. (Pl. LIV. 1).

South of this block are the armoury and store-rooms. First comes a court with two corn-bins paved with brick and another circular bin divided by cross-walls into four compartments like a hors-d'œuvres dish (Pl. LIV. 4). In the south-west corner are three small rooms, one of which contains a stone manger. At the east end is a brick platform and two ovens. Next to the south is a short corridor paved in brick off the south side of which open two long magazines with supports for shelves in the western one (Pl. LIV. 2, 3). These shelves were 83 cm. above the floor and the planks were 7 cm. thick, as can be seen from the marks on the wall. This magazine seems to have been blocked at some time, for a barrier, one brick high with a roll top, runs across the stone threshold. The eastern magazine has the same type of cross walls but no signs of a shelf, and it is reasonable to suppose that here were the arms-racks where spears could be stacked. At the west end of the corridor is a small closet and a flight of steps.

Divided by a door from the armoury are two more magazines. The eastern of these has a separate compartment to the south in which were found more fragments of leather uniform collars. East of these are two more corn-bins (one with a vase of the type XII. 1 sunk in it) and four ovens.

The streets separating the various buildings of this quarter are some 15 cm. thick with horse manure. We have suggested dividing this area into Military and Police Quarters as has been seen, but probably there was little difference between the two bodies. To-day the members of the Sudani Camel Corps are called indifferently askari, bulis, or hegana (soldier, policeman,

<sup>&</sup>lt;sup>1</sup> Cf. The House of the Vizier Nakht, C. of A. I. 6, 38.

or frontier-man). The presence of stables in R. 42. 10 only might imply that this building housed the mounted or rather mechanized section of the Household Brigade (G. O. C. Ranufer). It does seem, however, that this building is peculiarly suited to the *Mazoi* and no doubt the 150–200 horses which could be stabled there would amply suffice for both guards of honour and flying squads of police.

## OBJECTS

- R. 42. 1. 33/172. Fragment of faience, 4.2 cm. long. (Pl. LXXVIII. 4.)
- R. 42. 2. 33/161. Fragment of helmet in blue faience for inlay, 11.8 cm. high (San Diego). (Pl. LXXIX. 5.)
  - 162. Wig in blue faience for inlay, 9 cm. high (Cairo). (Pl. LXXIX. 5.)
  - 163. Fragment of ditto, 11.5 cm. high (Otago). (Pl. LXXIX. 5.)
  - 164. Ditto, 7·1 cm. high (Cairo). (Pl. LXXIX. 5.)
  - 165. Uraeus head in faience, 5.2 cm. long (Ashmolean). (Pl. LXXVIII. 4.)
  - 166. Fragments of gold leaf on plaster and red faience from the stone-lined pit.
  - 167. Limestone knob, 5-1 cm. diameter (East Anglia).
  - 168. Fragment of wig in blue faience, 6-6 cm. high (East Anglia). (Pl. LXXIX. 5.) Faience ring of Akhenaten, Type I. A. 2i.
- R. 42. 3. 33/169. Fragment of wooden strut with lines of blue paint, 8 cm. long.
  - 170. Fragment of helmet in blue faience, 4.3 cm. high. (Pl. LXXIX. 5.)
  - 171. Two bronze nails (Amsterdam).
  - 184. Bronze mattock, 14 cm. long (Cairo).
  - 189. Fragment of pottery figurine, 5.3 cm. high.
- R. 42. 4. No object of importance, see p. 137.
- R. 42. 5. 33/185. Fragment of wig in blue faience, for inlay, 7.2 cm. high (Stepney).
  - 186. Upper part of pottery figurine of woman, 5.2 cm. high (Cairo).
  - 187. Inlay of obsidian, 3.6 cm. square (Cairo). (Pl. LXXVIII. 4.)
- R. 42. 8. 33/285. Three bronze needles.
  - 288. Three bronze knives, 34, 37, and 32 cm. long. One has grass-bound wooden handle (Cairo and Brooklyn). (Pl. LXXVI. 10.)
  - 289. Alabaster finial, 3.7 cm. high (Cairo).
  - 290. Bronze knife with heavy medial rib, 15.3 cm. long (Brooklyn). (Pl. LXXVI. 10.)
  - 291. Fragment of glass dish, 4.6 cm. long (Cairo).
  - 300. Bronze dagger with flange for inlaid hilt, 36.5 cm. long (Cairo). (Pl. LXXIX. 4.) Faience ring of Akhenaten, Type I. A. 2b.
- R. 42. 9. A. 33/286. Two bronze needles (Brooklyn).
  - 287. Fragment of faience knob of box with early Aten name, 3 cm. long (East Anglia). (Pl. LXXVII. 9.)
  - 292. Uraeus head in faience, 4.8 cm. long.
  - 296. Many fragments of glass. Drop pendants, inlays, &c. Fragments of blue faience inlays for wigs and wings. Some fragments show the name of Tuthmosis IV.
  - B. 36/112. Bronze ring engraved with the King's name, 2 cm. high (San Diego).
    - 113. Two uraeus heads in faience, 3·1 cm. long (Stockholm).
    - 114. Base of Late Helladic IIIa pilgrim flask, 7·3 cm. long (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 6.)
    - 115. Bone weaving tool, 13.6 cm. long.
    - 116. Bronze tweezers, 5 cm. long. (Pl. LXXIX. 3.)

- 117. Rough stone vase roughly blocked out into human face, 17 cm. high.
- 118. Alabaster finial, 3 cm. high.
- C. 36/121, 127. Sherds of Late Helladic IIIa ware (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 6.)
  - 122. Headless pottery figurine of a woman, 7.5 cm. high. (Pl. LXXIX. 12.)
  - 123. Fragment of faience plaque, 5.3 cm. high (Stockholm).
  - 124. Head of animal in pottery, 5.2 cm. high. (Pl. LXXIX. 12.)
  - 125. Part of limestone stool.
  - 126. Limestone lid, 7 cm. diameter.
  - 128. Fragment of transparent blue glass engraved with a hand, 2.5 cm, high (British Museum).
  - 129. Object of opaque white glass, 3.5 cm. high (University College).
  - 130. Fragment of hornblende porphyry bowl.
- D. 36/133. Bronze stylus.
  - Sherd of Late Helladic IIIa ware (Museum of Classical Archaeology, Cambridge).
     (Pl. CIX. 6.)
  - 135. Two fragments of faience.
  - 136. Clay figurine of animal. Headless, 4.4 cm. long. (Pl. LXXIX. 12.)

Faience pendant, cartouche of Akhenaten, Type IV. E. 1.

- E. 36/140. Sherd of unknown ware. Red with white rays (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 6.)
  - 141. Uraeus head in faience, 2.6 cm. long.
  - 143. Coils of snake in limestone, 17 cm. long.
  - 144. Fragment of alabaster hands.
  - 145. Two limestone loom weights, 7 and 8 cm. diameter.
  - 146. Small copper ingot, 5.4 cm. square (Cairo). (Pl. LXXIX. 3.)
  - 149. Bronze tweezers, 5.8 cm. long. (Pl. LXXIX. 3.)
  - 159. Fragments of painted plaster, ? from a box, inscribed with name and titles of Meritaten (University College).

Faience ring of Akhenaten, Type I. A. 2b.

Faience ring of Tut'ankhaten, Type I. A. 4a.

Two faience rings of Meritaten, Type I. A. 6a.

- R. 42. 10. 33/297. Fragments of coloured leather collars, &c., from the south rooms in the west section.
  - 298. Bronze nail, 3.6 cm. long.
  - 299. Alabaster finial, 3.6 cm. long (San Diego).
  - 301. Fragment of faience (Museum of Archaeology and Ethnology, Cambridge).
  - 302. Fragment of gilt tube.
  - 304. Fragments of coloured leather collars from the south rooms in the central court (Manchester and Cairo). (Pl. LXXVIII. 11.)
  - 306. Bronze knife or spear blade, 14.3 cm. long (Ashmolean).
  - 308. Large faience mandrake for inlay, 5·1 cm. high (Cairo).
  - 309. Ditto, of lotus, 2.2 cm. high.
  - 312. Block of sandstone from the parade ground inscribed with part of cartouche of Tuthmosis IV, 19.5 cm, high, (Pl. LXXIX, 1.)
  - 313. Neck of black granite statue, 11 cm. across (East Anglia).
  - 314. Wooden kohl stick, 9.9 cm. long.
  - 317. Glazed steatite scarab with design, XIIth Dynasty, 1.6 cm. long (Otago).
  - 318. Part of ring in green faience with early Aten name, 2 cm. high (Cairo).
  - 322. Bronze knife, 17.5 cm. long (San Diego).

- 323. Bronze kohl stick, 4.6 cm. long.
- 324. Alabaster finial, 3.3 cm. high (East Anglia).
- 326. Wooden pestle, 9.8 cm. long. Wooden spool, 4 cm. diameter (British Museum).
- 327. Stone bead, 1.8 cm. high.
- 328. Stone label pierced near the top, 6.7 cm. high (Cairo).
- 329. Alabaster vase lacking mouth, 10.4 cm. high (Glasgow).
- 330. Cypriote jug, 10.2 cm. high (Glasgow).
- 331. Fragment of wig of hard limestone statuette, 7.8 cm. high.
- 333. Part of limestone mould, 6.2 cm. high (East Anglia).
- 334. Fragment of glazed brick showing a human figure, 10·3 cm. high (Cairo). (Pl. LXXIX. 8.)
- 335. Cypriote bottle, 13.2 cm. high (Brooklyn).
- Two faience rings of Akhenaten, Types I. A. 2b and I. A. 2i.
- Pendant, cartouche of Nefertiti, Type IV. E. 2.
- R. 42. 11. No objects of importance.

# SUMMARY OF UNIMPORTANT OBJECTS FROM THE MILITARY AND POLICE QUARTERS

- R. 42. 1. 33/-. Ring I. C. 5. Pendant IV. C. 11. Mould IV. C. 6. Beads X (3), XXI, XXIV (4), XXII (4), XLI (5). Pottery XIII. 7, XIV. 12, XIV. 13.
- R. 42. 2. 33/-. Ring I. C. 5. Pendant IV. C. 7. Inlay 582. Beads I (2), XVIII, XXXI, XXXII. Pottery III. 6 (3), VII. 2, XVI. 3, XX. 2 (painted), XVI. 1.
- R. 42. 3. 33/-. Rings I. C. 5, I. C. 25. Pendants IV. C. 11, IV. C. 13b. Inlay 590. Beads VI, X, XXIV, XXXII. Pottery: sherds only, no distinguishable type.
- R. 42. 4. 33/-. Pendant IV. D. 6.
- R. 42. 5. 33/-. Ring I. C. 61.
- R. 42. 8. 33/-. Ring I. C. 5. Pendant IV. C. 19. Beads XXIV, XXXI. Fragments of gold leaf.
- R. 42. 9. A. 33/-. Mould IV. D. 6. Inlay 496. Beads III, VIII, XXI, XLVIII. Pottery III. 1, XV. 6 (2), XXII. 12.
  - B. 36/119. Fragment of faience. Rings I. C. 5 (several), I. C. 39. Pendants IV. C. 6, IV. C. 8. Inlay 458. Beads XXII (many), XL, XLI.
  - C. 36/-. Ring I. B. 4. Pendants IV. A. 11, IV. B. 21, IV. C. 11, IV. C. 40, IV. D. 10. Mould, ring. Inlay 587. Beads XIX, XXIV, XXIX. Pottery (all from the pit) XI. 1 (5), XI. 3, XIII. 5 (many), XIII. 8 (3), XIII. 10, XIV. 2, XIV. 12 (3), XV. 1 (many), XV. 4 (many), XV. 9, XV. 22 (many), XV. 23 (8), XVI. 1 (many), XVI. 5 (many), XVI. 7, XVII. 10 (3), XVII. 12, XIX. 1, XX. 2, and many broken.
  - D. 36/-. Ring I. C. 3. Pendants IV. C. 8, IV. C. 12 (2), IV. C. 19, IV. D. 7. Moulds IV. C. 1. Scarab. Beads IV, VI, VIII (4), XVIII (several), XIX, XXII (many), XXIV, XLVIII. Pottery XIV. 2, XV. 24.
  - E. 36/-. Ring I. C. 23, I. C. 30. Pendants IV. C. 6, IV. C. 8, IV. C. 13c (2). Mould of scarab. Beads VII, XIV (several), XXII (many), XL, LI. Pottery XV. 23, XVII. 2, XVII. 6.
- R. 42. 10.
  33/303. Bronze needle. 305. Gold leaf. 307. Faience spool. 310. Contents of owls' stomachs. 311. Fragment of limestone relief. 315. Limestone knob. 316. Bone plaque. 319. Faience fragment. 320. Bronze rod. 325. Bronze needle. 332. Bronze rod. Rings I. B. 1, I. B. 4 (2), I. C. 5 (6), I. C. 8, I. C. 13, I. D. 4, I. D. 5. Scarab II. D. 1. Udat eyes III. B. 4, III. B. 5 (2). Pendants IV. B. 16, IV. C. 5, IV. C. 7 (15), IV. C. 8 (5), IV. C. 10, IV. C. 11, IV. C. 13a, IV. C. 13b, IV. C. 13d, IV. D. 6 (2), IV. D. 10. Inlays 448, 499, 531. Mould for ring. Beads I, VI, VIII (3),

XVIII, XXI, XXII (2), XXIV (3), XXV (2), XXVI, XXXI (2), XXXIII (5), XLI, XLVII (2), LVI (2), LXIV. Pottery (Commandant's House) III. 1, XIII. 10, XVI. 1 (several), XXII. 1; (Corn bins) XII. 1, XV. 4, XXI. 3; (Men's quarters) XVI. 1; (SE. of parade ground) XIV. 13, XV. 22, XVI. 1. Bronze nail, glass rods, fragments of variegated glass, fragments of gold leaf on plaster.

R. 42. 11. 33/-. Ring I. C. 39. Pendant IV. B. 11. Mould for ring. Beads VI, XXIV, XXXII (3), XXXIII (2), XLII (2), XLIII.

# CHAPTER IX

# THE SOUTH-EAST QUARTER

This group (Pl. XXII) comprises three houses, R. 43. 1, 2, and 3. The first of these has two distinct divisions which may well be independent. There is no connexion between these houses nor do they seem to link up with any other group excavated or unexcavated. With them will be taken the rubbish-heaps or rather such few objects as were picked up on the surface, for Petrie's exploration of them seems to have been thorough (Petrie, op. cit. 15).

R. 43. 1. A. The House (Pl. LV. 1). The north side of the grounds where lay the entrance to the estate was denuded. It may or may not have included the pit which lies a little to the north. Along the west and south sides of the house is a passage off which a number of store-rooms open. The house itself was entered by a flight of steps against the north wall which have practically disappeared. In the porch was a single column base (70 cm. diameter, for a column of 30 cm.). Next came a lobby with a similar column. The entrance-hall which ran along the north side of the house had at least two columns (80 and 40 cm.). At the west end of it are stairs leading up to the roof. Almost all the door-sills in this house show traces of red paint from the jambs. There was one fragment of plaster from a beam painted with a block pattern in blue and yellow and a few fragments of linen painted red, probably from the columns. The door to the main living-room is set slightly to the east of the centre. It boasted jambs of limestone. This room contained four columns of large size (110 and 45 cm.). The fragments of plaster from the beams were too broken to show anything but the fact that they had been decorated with a block pattern. The pink rafters also were too fragmentary to determine their size. There are four rooms to the west, two of them being provided with brick supports for shelves. In these were found two column bases (50 and 23 cm.) lying loose, which implies that the loggia on the roof was built on this side. To the south are an inner sitting-room and one or two others. The master's suite consists of a bathroom and a bedroom with the bed-niche to the east.

B. The Painted Pavilion (Pls. XXIII and LV. 2-4). This building may or may not belong to the house. At one point in its north wall there is a break which looks as if there might have been an entrance there. The main entrance, however, was from the west, where a big open court projects. East of this is another court which encloses a deep pit of the usual type. In the east wall of this court is a door with a stone threshold. This leads to a brick-paved room surrounded by columns built of mud brick joined by screen walls. These columns are of the lotus type. They were plastered with mud, and over the mud was a layer of linen on which the paint was laid (Pl. LV. 4). The screen walls were painted blue and decorated, the lower part at least, with cartouches in yellow. Most of the door-jambs seem to have been painted green, while the plastered lintels and cornices were of the elaborate type shown in Fig. 20, p. 141 below. To the north is a lobby which leads to three small rooms and a flight of stairs. To the south a similar lobby gives access to a shrine (Pl. LV. 2). There are two white plaster column bases in the centre (80 and 40 cm.). By one of them was plastered a hearth of pottery. Along the south wall is a brick dais with a brick column of the type already described on either side, apparently to

support a kind of baldachin. There is a dado of the ordinary panel pattern in this room, and the ceiling was painted with ducks and butterflies on a yellow ground (Pl. LV. 3).

East of this group of rooms is a passage running the width of the house which gives access to the following. To the south is a series of chambers, one of which contains a square brick pier. In the centre is a colonnade with four stone bases surrounded by plastered brick. The predominating colour of the columns which they supported seems to have been blue. East of this are four rooms with brick supports for shelves. Finally, to the north is a lobby from which another room apparently containing a flight of stairs is reached.

In the south-west and south-east corners of the grounds were small rooms.

#### **OBJECTS**

## A. The House

- 36/147. Alabaster plaque shaped not unlike a Boeotian shield, 5 cm. high.
  - 148. Ivory comb, 5 cm. long (University College).
  - 154. Group of beads (XXII and XXXII) and pendants (IV. C. 11).
  - 176. Two rude dolls in mud, 8.5 and 6.5 cm. high (Cairo). (Pl. LXXIX. 12.)
  - 177. Two wooden knobs for a box with the name of Akhenaten inlaid in yellow, 4.4 cm. diameter. (Pl. LXXIX. 9.)
  - 181. Sherd of Late Helladic IIIa ware (Museum of Classical Archaeology, Cambridge). (Pl. CIX. 6.) Faience scarab of Tyi, Type II. A. 5a.

# B. The Pavilion

- 36/150. Limestone mould for metal amulets, 12 cm. long (Cairo). (Pl. LXXIX. 10.)
  - 151. Two sherds from Late Helladic IIIa amphora (Cairo). (Pl. CIX. 6.)
  - 152. Wooden and glass kohl sticks.
  - 153. Bronze chisel and needle, 11.9 and 10.5 cm. long (University College). (Pl. LXXIX. 3.)
  - 158. Thong and fragments of gilt leather sandal.
  - 160. Flat dish of pottery with polychrome design, 42 cm. long (Ashmolean). (Pl. LXXVIII. 10.) Faience ring of Akhenaten, Type I. A. 2i.
- R. 43. 2. The House of the King's Statue (Pl. LVI). This building stands quite by itself. To the west lies a court with store-rooms to north and south. From this the main building is entered direct. First comes a long brick-paved hall with two rows of four columns (70 and 30 cm.) (Pl. LVI. 1). The paving is much destroyed. There were fragments of block pattern on plaster from the beams as well as pieces of painted linen from the columns as in R. 43. 1. On either side of the door leading east from this is a low brick bench, the northern one having a low arm (Pl. LVI. 1). In the main room, too, the paving is much broken. One column base (75 and 35 cm.) survives but not in situ. There are traces of a stone lustration slab against the north wall. In the south-west corner was found the larger fragment of the wooden shrine (see below, p. 141), the smaller fragments of which were found in the first room. Fragments of a plaster lintel similar to that found in the east room (see below, p. 141) lay near the entrance. Many pieces of the beams, some of which bore a block pattern, some of which seemed to be entirely blue, covered the floor. Two rooms lie to the north. To the south is a bedroom with a bed-niche to the east. The door leading into this had a stone lintel and cornice (as Fig. 20). From the main room a passage leads to a kind of east hall with a central row of seven column bases of varying sizes (Pl. LVI. 3, 4). The three central ones measure 65 and 35 cm., flanking these are bases of 50 and 25 cm., and the end ones are 40 and 25 cm. Fragments of painted linen

bearing royal cartouches were found here, showing the type of decoration employed on the columns. There was a plaster lintel of the type shown in Fig. 20 over the door. The beams seem to have confined themselves to the block pattern. From this hall the rooms flanking the entrance passage are reached.

In all these latter rooms the brick paving has been removed and the floor dug up for upwards of half a metre, further proof of the importance of the building and the possibilities it must have offered to treasure-hunters.

We can reconstruct the wooden shrine which was evidently situated in the central room without much difficulty. It evidently was crowned with the cornice of wooden uraei (see below, 36/171, Pl. LXXIX. 7). The walls were 1.5 cm. thick and were plastered and decorated in painted relief. The largest fragment is shown in Pl. LVI. 2 and the inscription shows that it had to do with "the great statue which the King caused to be made". The pieces found in the west room probably came from the doors, for they are decorated on both sides, on one, whether outer or inner we do not know,

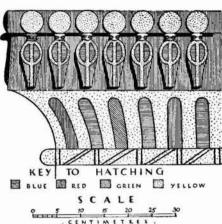


Fig. 20. Plaster lintel with torus and cavetto, and beam pattern from R. 43. 2.

with a figure of the King, on the other, with cartouches among which occurs the name of Nefertiti in its abbreviated form. In front of the shrine must have been the wooden sphinx (see below, 36/179, Pl. LXXIX. 11), probably one of a pair. The "great statue" has disappeared, but the subordinate ones are represented by the wooden arm and hand (36/172, Pl. LXXIX. 9) and the wooden plumes from above the Queen's head-dress (36/161, Pl. LXXIX. 9).

# OBJECTS

- 36/156. Faience button in the shape of a daisy, 2.4 cm. diameter.
  - 157. Heavy bronze nail, 7.2 cm. long. (Pl. LXXIX. 3.)
  - 161. Wooden plumes from head-dress of a statue of the Queen. Faint traces of a design in red on yellow, 16 cm. high (San Diego). (Pl. LXXIX. 9.)
  - 162. Pair of bronze tongs ending in hands, 38 cm. long. (Pl. LXXIX. 3.)
  - 163. Part of lid of wooden pen-case inscribed with cartouche of Amenophis, 14 cm. long (University College). (Pl. LXXIX. 9.)
  - 164. Complete stirrup vase of Late Helladic IIIa ware, 12 cm. high (Cairo). (Pl. LXXVIII. 9.)
  - 165. Helmet of a statuette. Blue faience, 12 cm. high (Cairo). (Pl. LXXIX. 6.)
  - 166. Fragment of ditto, 7.2 cm. high (Brooklyn). (Pl. LXXIX. 6.)
  - 167. Ditto, 6.5 cm. high (Stockholm). (Pl. LXXIX. 6.)
  - 168. Part of faience fish-bowl, 4.5 cm. long (Fitzwilliam).
  - 169. Lip of faience jug, 3.5 cm. high.
  - 170. Wooden kohl stick, 14.5 cm. long.
  - 171. Ten complete and several more fragmentary wooden uraei from the cornice of the shrine, 15 cm. high (Glasgow). (Pl. LXXIX. 7.)
  - 172. Forearm and hand of wooden statuette, 13.5 cm. long (Brooklyn). (Pl. LXXIX. 9.)
  - 174. Rim of tall stone vessel, ? Minoan, 10.5 cm. high (Cairo).
  - 175. Two small bronze chisels, 4.5 cm. high (University College). (Pl. LXXIX. 3.)
  - 179. Recumbent sphinx in wood. Headless with traces of blue paint, 26 cm. long. (Pl. LXXIX. 11.) Faience ring of Amenophis III, Type I. A. 1e.

Also fragments of papyrus.

R. 43. 3. This house again is quite isolated. It has certainly been dug by somebody who has gone to the length of sieving the debris from some of the rooms before throwing it back. It is in much the position of Petrie's No. 5 (op. cit., p. 22). But the plan has nothing in common. The entrance is hard to determine. Probably it is from the north where are three small rooms. The central room is paved with brick and had a dais to the south. The other rooms need no comment.

To the south are two well-built corn-bins and to the east is a deep pit and beyond that three open courts. In the south-east are a few store-rooms.

#### OBJECT

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36/180. Object of faience, 4 cm. high. (Brooklyn). (Pl. LXXIX. 6.)
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The Rubbish-heaps. These lie between R. 43. 3 and the Police Station R. 42. 10. They were thoroughly explored by Petrie (op. cit., p. 15) and the following objects are merely the result of casual strolls over the areas during practically the whole of our six seasons in the Central City.

## OBJECTS

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33/110. Five sherds of Late Helladic IIIa ware.
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156. One ditto.

249. Two ditto. (Pl. CIX. 7.)

34/-. Six ditto.

35/202. Hind quarters of pottery animal, 6 cm. long. (Pl. CIX. 3.)

36/120. Three sherds of Late Helladic IIIa ware. (Pl. CIX. 6.)

137. Six ditto. (Pl. CIX. 6.)

138. Five ditto. (Pl. CIX. 6.)

142. Two ditto. (Pl. CIX. 6.)

139. Cypriote sherd. (Pl. CIX. 6.)

# SUMMARY OF UNIMPORTANT OBJECTS FROM THE SOUTH-EAST QUARTER

# R. 43. 1

# A. The House

36/178. Base of variegated glass bottle. Pendants IV. A. 10, IV. C. 6, IV. C. 11 (2), IV. C. 52, IV. D. 2. Inlay 496. Beads VI, XXII (3), XXXII (6). Pottery XII. 1, XV. 3, XVI. 1.

# B. The Pavilion

36/155. Pottery figurine of bird. (Pl. LXXIX. 12.) Rings I. C. 5 (2). Pendants IV. C. 11, IV. C. 12a, IV. C. 19, IV. D. 4. Beads VI, VII, X, XIX (3), XXIV (5), XXXII (several), LXIV. Pottery XIII. 5, XIV. 3, XVI. 1, XXIII. 10.

## R. 43. 2

36/173. Fruit in pottery. Rings I. B. 4, I. B. 7, I. B. 13, I. B. 28, I. C. 5 (several). Scarab II. D. 1. Pendants IV. A. 10 (2), IV. C. 1a, IV. C. 1b, IV. C. 3, IV. C. 6, IV. C. 8, IV. C. 10, IV. C. 11, IV. C. 12a, IV. C. 13a, IV. C. 15, IV. D. 10 (2). Beads IV, V (3), VI, VII, XIV, XVIII, XIX (3), XXII (5), XXIV (6), XXXI, XXXII (many), XLIII (2), XLIV, XLIX, LII (many), LXIV. Pottery: House V. 1, XVI. 1. Grounds XII. 1, XV. 3 (4, one painted).

# R. 43. 3

36/-. Rings I. C. 5 (2), I. C. 26. Pendants IV. C. 4, IV. C. 7, IV. C. 8. Beads VIII (3), XIX, XXII (3), XXIV (2), XXXII, L, LI, LXVIII.

# CHAPTER X

# THE INSCRIPTIONS

# By H. W. FAIRMAN

THE inscriptions which are dealt with in this chapter are the fruits of seven seasons of excavation. It is not surprising, therefore, that various hands have been concerned with the recording of them, and that from time to time different methods of registering have been employed. During these seven seasons the following have been responsible for the initial recording and registering of the inscriptions in the field, and many of their drawings have been incorporated in the plates: in 1926–7 Mr. (now Professor) S. R. K. Glanville was responsible for the inscriptions; in 1933–4 Mrs. Pendlebury; in 1936–7 Miss M. S. Drower (now Mrs. Hackforth Jones); and in 1931–2, 1932–3, 1934–5, and 1935–6, the writer.

With reference to the field numbers of the inscribed objects it should be noted that in 1926–7 the numbers are those of the general register of the expedition. In the following seasons ostraca, jar sealings, small clay sealings, jar handles, and most of the inscribed stones were registered independently of each other and of the general card index. With reference to the jar sealings it should also be noted that up to 1936–7 each individual sealing or fragment of a sealing was registered and numbered separately: in 1936–7, however, the seals were grouped into types and numbered accordingly, the number of specimens of each type being indicated separately.

It will be realized from a glance at the following pages and the plates that the excavation of the central portion of the city has yielded very much more inscriptional material than the work in the southern section of the site or in the Northern Suburb. Experience shows that ostraca and jar sealings only occur in considerable numbers in or near palaces, temples, or official buildings, and that elsewhere they are relatively rare. In the Northern Suburb, for instance, several seasons' work only produced 23 jar sealings and some 300 hieratic inscriptions, whereas in the Central City the figures are about 400 and about 2,000 respectively. The point is an important one, for it affords good reason for regarding the bulk of the inscriptional material published in Petrie, Tell el Amarna, Pls. XXI–XXV, as having come from the same part of the site as that with which this memoir is concerned, and we shall therefore make considerable use of the inscriptional material collected by Petrie.

# JAR SEALINGS

Typology. The mud jar stoppings showed a certain degree of variety in size and in the materials used. The differences in size are largely accounted for by the differing types of pots on which they were employed and can largely be overlooked, and hence the main varieties can be reduced to three.

<sup>&</sup>lt;sup>1</sup> Hereafter, in addition to the normal and recognized abbreviations, the following abbreviations are employed in this chapter: P. = Petrie, Tell el Amarna; Davies = Davies, The Rock Tombs of el Amarna. The two previous volumes of The City of Akhenaten are referred to as COA.

Type A (Pl. LXXXIII. A). Flat topped. This type has already been described in COA. I. 161 and Fig. 30, and nothing has been found to modify the descriptions given there. This type of stopping is by far the most common at Amarna. The material used is apt to vary, but the majority of the sealings were made from one of two kinds of mud. The greater number were of fine dark mud mixed with plenty of sand. Stoppings of this material are usually the best preserved: they have a fine, hard, dark surface which takes a good impression and does not easily rub away. A far less satisfactory but commonly used material was a fine mud which was mixed with plenty of finely chopped tibn. Stoppings of this material are usually light brown in colour and in poor condition; the signs are not at all well defined and the surface is usually much worn away.

Most of the stoppings showed signs of the palm fibres which have already been noted in COA. I. 161, but a few examples have been found in which a sherd was used instead of fibres. In 1936–7 a sealing was found in which a complete saucer had been used instead of fibres or sherd, the base of the saucer fitting into the mouth of the pot.

A fragment of a very large stopping of this type was baked (31/32: 67, from P. 43. 1). No other traces of a similar treatment have been observed, and this may well only be chance, to be explained by the fact that it was found close to an oven.

Type B (Pl. LXXXIII. B). Cones. Stoppings of this type have a tang which fitted into the mouth of the pot, while the edges were brought down over the outer rim of the vessel. No complete stoppings of this type were found and it is impossible, therefore, to give precise measurements. They showed very little variation in size, and on the average were 10–11 cm. from the end of the tang to the top of the cone, and approximately 12 cm. wide at the point where the tang entered the mouth of the pot.

One or two stoppings of this type were hardly cones at all, and but for a very small tang, resemble Type C. They rarely exceeded 6 cm. in height, and bore only one impression across the top. With these few exceptions, the impressions of the stamps were always on the side, and normally three or four were found on each stopping. The top was usually quite unmarked.

In none of the stoppings of this type were there any signs of the use of palm fibre on the under surface, but almost all showed traces of a resin-like substance on all exposed surfaces of the tang. In one case impressions of a coarse cloth were observed. The material was almost invariably coarse and friable and greyish-white in colour. Quite exceptional was a sealing which was made of gypsum (32/33: 60, from Q. 41. 10), was painted (see below), and had three blank impressions.

Type B. 1 (Pl. LXXXIII. B. 1). A sub-type of Type B, of which only two examples were found, was distinguished by two broad and shallow parallel depressions which ran from side to side of the stopping. The examples of this type were found in the palace at the extreme north of the site and therefore do not strictly enter within the scope of this memoir, but they are included here to complete our survey of types of sealing. No perfect specimens were found, and neither example preserved more of the inscribed surface than is shown in the drawing.

Type C (Pl. LXXXIII, C). Shallow, rounded stoppings. Examples of this type were rare and consisted of a small quantity of mud which was placed on top of an inverted, shallow bowl placed over the mouth of the jar. The material was ordinary mud, mixed with plenty of tibn, and each stopping usually bore a single impression across the top. No complete example was

found, the edge having been broken away in every case. The average thickness of the mud was 2 cm., and the width of the bowl over which it was placed was usually 13 cm.

COLOUR. By far the greater number of the stoppings were perfectly plain except for the seal impressions. In a comparatively restricted number of instances, however, seals were further decorated by paint. There seems to be no particular significance attached to this painting, for some impressions had both painted and unpainted examples. Thus one example of Pl. LXXXII. 101 (36/7: 39) was painted blue, but two others bore no paint; Pl. LXXXII. 85 (36/37: 11), one painted (white signs on blue ground) but five were not; but of Pl. LXXXII. 104, there were six stoppings with yellow signs on blue ground (33/34: 115 = Pl. LXXIX. 2), and one painted plain blue (35/37: 61).

In the majority of the painted stoppings the colour was either a wash of blue, white, or red paint which covered all the outer surface, or the raised hieroglyphs were painted one colour, the rest of the stopping being of another hue. The following are the details of all such coloured stoppings:

# 1. Stoppings painted a single colour

- (a) With blue: 31/2: 117 (= Pl. LXXXI. 58), 121 (= Pl. LXXXIII. 142), 123, 124, 125 (= Pl. LXXXIII. 147), and 89, 90, 122 (not published); 32/3: 33 (= Pl. LXXXII. 78), 48 (= Pl. LXXXI. 9); 33/4: 74 (not published); 35/6: 2 (not published); 36/7: 39 (= Pl. LXXXII. 101, one example painted, two without colour), 61 (= Pl. LXXXII. 104).
- (b) With red: 32/3: 60 (Type B, from Q. 41. 10), was made of gypsum and bore three seal impressions, all of which were apparently blank: the whole of the outer surface was covered with red paint. On the other hand, another stopping of Type B from Q. 41. 10 also had blank impressions, but was of the normal material and was unpainted. From P. 43. 1 also came broken fragments of sealings which had been painted red.
- (c) With white: 31/2: 76 (= Pl. LXXXII. 107). In the same season there were found in P. 42. 2 a number of broken pieces of large stoppings of Type A with the top rather more rounded than in the normal type. All were covered with white paint, very few of the fragments were inscribed, and the material of all of them was a very coarse, friable mud mixed with much coarsely chopped tibn.

# 2. Stoppings with hieroglyphs in one colour and the remainder of the sealing in another

- (a) Yellow signs on blue ground: 33/4: 115 (= Pl. LXXXII. 104, six examples; but in 36/7: 61, with the same type of seal impression, both the seal and the hieroglyphs were plain blue).
- (b) White signs on blue ground: 36/7: 11 (= Pl. LXXXII. 85: one example painted, and five others without colour), 68 (= Pl. LXXXII. 102), 83 (= Pl. LXXXII, 86).
  - (c) Red signs on white ground: 35/6: 7 (not published).
- (d) Red impressions: 33/4: 48 (not published; apparently only the seal impressions bore any colour, the mud surface of the rest of the stopping being left untouched).

A cache of from 12–15 stoppings, from a shallow pit in the Servants' Quarters of the Palace, produced sealings that are unusual in form and in decoration (36/7: 74). All the fragments bore impressions of the type reproduced on Pl. LXXXII. 115. All the stoppings and impressions were covered with white paint, over which were patterns in red and blue, the

designs consisting of red over the tops of the stoppings, and below that circles, lines, or triangles in red and blue, the ruling lines being indicated in black (Fig. 21). From the same cache came four stoppings painted orange, but without any seal impressions.







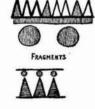




Fig. 21. Painted jar sealings from the Palace (Scale 1:8 approx.).

Somewhat similar to these must have been the stopping 33/4: 73. No drawing of this exists, but according to Mrs. Pendlebury's notes it was "painted with lotus petal frieze, white on blue over white band with yellow blobs—below blue?" It was not inscribed.

Translations of the Impressions. On Pls. LXXXI—LXXXIII are figured 156 impressions from jar stoppings or fragments of stoppings. We have published only new types which have not been printed either in COA. I, Pl. LV or COA. II, Pl. LVIII. A considerable number of the impressions resemble those already published in P., Pl. XXI, and have been included in our drawings.

In the majority of cases the impressions were drawn in full-size facsimile at Amarna.<sup>2</sup> Unfortunately, none of the 1926–7 impressions and a few of those from 1936–7 have not been drawn in this way. They have been reconstructed from details in the note-books as near as possible to what must have been their original size, but naturally they cannot be

considered such accurate facsimiles as most of the drawings.<sup>3</sup> The scale of the reproductions is in every case ½.

In addition to the new types a number of duplicates of types already published in COA. I, Pl. LV, and COA. II, Pl. LVII, were found. The following are the details of these:

Duplicates of impressions published in COA. I, Pl. LV. A = 26/7: 3; 32/3: 15, 20, 27; 33/4: 53 (the specimens from 32/3 were all of Type A). C = 36/7: 18. E = 32/3: 37; 34/5: 4 (Type A). F = 26/7: 73. H = 32/3: 43 (Type A). I = 26/7: 26. L = 33/4: 59. M = 33/4: 46 (Type A). N = 26/7: 25. T = 36/7: 46. U = 32/3: 11 (Type A). X = 32/3: 2, 45 (both Type A); 33/4: 2; 36/7: 4 (35 examples). Y = 36/7: 2 (12 examples: in addition, 26/7: 66 = either W, X, or Y). Z = 32/3: 26 (Type A). BB = 33/4: 61, 88. FF = 33/4: 37; 36/7: 58.

Duplicates of impressions published in COA. II, Pl. LVII: H=36/7: 37. J=33/4: 14 (Type A).

In the following translations<sup>4</sup> of the impressions discussion of the place-names has, in the main, been omitted, since such matters are more conveniently treated in Appendix A, which deals with all the names which may possibly be assigned to buildings in the central portion of the City.

<sup>&</sup>lt;sup>1</sup> Fig. 21 is based on Miss Drower's sketches. The scale is uncertain but is probably about ½.

<sup>&</sup>lt;sup>2</sup> Miss Drower drew the following: 1, 4–7, 12–14, 17, 18, 21–3, 26, 27, 36, 39, 41, 43, 45, 47, 48, 51, 60, 66, 68, 69, 75, 84, 86, 91–4, 99–104, 115, 119, 121, 124, 125, 137–41, 143, 144, 149, 150, 152–4. Mrs. Pendlebury drew: 8, 10, 46, 52, 57, 64, 72, 74, 81, 90, 110–13, 126, 128, 130–4, 136, 145, 155. Fairman drew the remainder.

<sup>&</sup>lt;sup>3</sup> The impressions from 1926–7 (Nos. 62, 73, 106, 129) and from 1936–7 (Nos. 63, 76, 79, 80, 82, 85, 120, 151, 156) which were not drawn on the field have been reconstructed by Fairman.

<sup>&</sup>lt;sup>4</sup> For the types of the individual impressions see Appendix B (a), pp. 212-15 below.

Lives Rec-Harakhte, who rejoices in the horizon (1). This is the first cartouche of the early form of the didactic name of the Aten.

--- Tum, lord of the land of Heliopolis (2).

Wine for the divine offerings of Ptah (3).

Wine of [the house of?] "Lives-Rēc-Ḥarakhte-who-rejoices-in-the-horizon" (4). There may not be room for the restoration of "the house of", but these words are obviously to be understood here and in No. 1 above.

Wine of the house of Lives- $R\bar{e}^{c}$ -Harakhte (5–7). ch  $R^{c}$ -Hr-thy is clearly an abbreviation of the full name given in Nos. 1 and 4.

Wine of the house of Rec-Harakhte (8-11); probably only variants of Nos. 5-7.

Wine of the house of  $R\bar{e}'$ ---- (12, 13): the full impression is not preserved.

Wine of the house of '3-hpr-k3-R' (Tuthmosis I) (14). Cf. the mention of the mansion (hwt) of the same king in P., Pl. XXII. 10; and the small seal impression COA. II, Pl. LV. 274.

Wine of the Mansion of Nebmarrēr (Amenophis III) (15, 16): differs very slightly from P., Pl. XXI. 1. 16 is much damaged but almost certainly belongs here, though it clearly differs from 15 and must have read somewhat differently.

Good wine of [the house of ?] Tyi (17): it may be questioned whether there was room for the insertion of  $\Box$  in the original, but its presence is clearly implied, here and in so many other cases.

Wine of the house of Amenophis - - - - (18): probably to be taken as referring to Amenophis IV, and is perhaps to be completed by the addition of 11 as in P., Pl. XXI. 2, which in other respects is grouped differently; for the spelling of irp with = see 84, 85 = P., Pl. XXI. 27.

--- Neferkheperurēr, warnrēr (19).

The Mansion of Neferkheperure (20): the impression seems to be complete except for the bottom ruling line of the oval, and there is not room for "wine".

Neferkheperurēc, wacnrēc, lord of wealth, rich in goods (21): the last word is probably to be restored of, cf. COA. I. 163, n. 7 and Pl. LV. SS: for css iht as an epithet of Akhenaten see Gunn's note loc. cit.; the scarab mentioned by Gunn is presumably Cairo 36235 (Newberry, Scarab-shaped Seals (CCG), Pl. IV and p. 60).

Wine of Neferkheperurēc, warnrēc, who propitiates the Aten (22): the translation assumes that the original did not have room for pr, but if it were present one could translate either Wine of the house of Neferkeperurēc, &c., or Wine of the House "Aten is propitiated" of Neferkeperurēc, warnrēc. Since, however, shtp itn is applied to Akhenaten on a scarab, there seem good grounds for taking shtp as a participle and for reading f as shtp itn and not shtp f for a fuller discussion of this reading, especially with reference to Nos. 66–70, see Appendix A, § C, 1(f). The impression did not have the normal oval surround.

Wine of [the house of] Akhenaten (23).

Wine of the house of Neferneferuaten, Nefertiti (24).

Good wine of the store-house of Neferneferuaten, [Nefertiti] (25).

[Wine of the house of?] the great royal wife (26).

<sup>&</sup>lt;sup>1</sup> This spelling also occurs in hieratic: see T. E. Peet, "The Egyptian Writing Board B.M. 5647, bearing Keftiu names" in *Essays in Aegaean Archaeology*, presented to Sir Arthur Evans in honour of his 75th birthday; also quoted *JEA*. XIV. 182.

<sup>&</sup>lt;sup>2</sup> B.M. 30596 = Hall, Catalogue of Scarabs, I. 196.

A fragment whose translation must remain doubtful (27). The fact that the signs are enclosed in a cartouche may indicate a connexion with a royal person, who in the circumstances can only have been Nefertiti. It is more probable that the presence of the cartouche is quite fortuitous, and the complete seal may have read "Excellent wine of the House of the Aten" and should be placed between Nos. 52 and 53.

The Mansion of the Aten (28).

Wine of the Mansion of the Aten in Akhet(aten) (29): presumably the scribe was confused by itn at the top of the sealing and omitted to insert a second one, which is obviously demanded.

Wine of the Mansion of the Aten (30-2).

[Very] good wine of the Mansion of the Aten (33): there is room for the restoration of a second  $\frac{1}{6}$  in the lacuna on the right.

The House of Rejoicing of the Aten (34-6).

Wine of the House of the Aten (37-49): for 42 cf. P., Pl. XXI. 15.

Good wine of the House [of the Aten] (50).

Very good wine of the House of the Aten (51, 52).

Wine for offerings of the storehouse of tribute (53-6): 57, 58 may also belong to this series; for other seals referring to this building but all grouped somewhat differently, see COA. I, Pl. LV. AA, BB, CC, DD, and P., Pl. XXI. 51.

Wine for offerings of the storehouse of the priests (59, 60).

Wine of the western river (of the house) of "Aten gleams" (61-4): the variant house of "Aten gleams" in 65 would indicate that these words are also implicit in 61-4. For fragmentary examples of similar types of seals cf. COA. I, Pl. LV, QQ(?); COA. II, Pl. LVII. F; P., Pl. XXI. 24. A number of examples were found by Ahmed Bey Kamal near the temple of the Sphinx (Ann. Serv. X. 117). Pr Thn itn is discussed below, Appendix A, § C, 3(i) (d).

Wine of the house of him who propitiates  $R\bar{e}r$  (66): except for the omission of the stroke below pr this is identical with P., Pl. XXI. 21.

Wine of the house of him who propitiates the Aten (67, 69): possibly to be translated "who propitiates Rē", see further below, Appendix A, C, 1(f). For 67 cf. P., Pl. XXI. 20.

Wine of the western river of the house of him who propitiates the Aten (68, 70): cf. the remark on 67, 69 above.

71, 72: two impressions which presumably belong either to the Thn itn or the shtp itn series.

73a, b: these impressions were found on a single stopping (26/7:30), (a) occurring on the sides and (b) on the top. It would appear, therefore, that top and sides bore different seal impressions; I know of no other instance of this.

Wine of "Rēr in the barque" (?) - - - - (74-8): the translation, which is not certain, follows Gunn (COA. I. 162 and n. 2). For other examples cf. COA. I, Pl. LV, K, L; P., Pl. XXI. 57; 76 is similar to P., Pl. XXI. 22.

Wine of the chief of the seers (i.e. the high priest of the Aten) (79, 80): for 80 cf. P., Pl. XXI. 8. Wine of Lower Egypt (81, 83): for 82 cf. P., Pl. XXI. 29, and for 83 cf. COA. I, Pl. LV. PP. Wine (84-6): for the spelling with a in 84, 85 cf. 18 and P., Pl. XXI. 27, and above, p. 147, n. 1.

<sup>1</sup> Throughout this chapter it is proposed to translate † by "good", †† by "very good", and ††† by "excellent".

87-97: fragments of impressions, the majority of which are very probably variants of the formula "wine of the house of the Aten".

Very good wine of This (?) (98).

Very good wine (99-101).

Very good wine of the house [of the Aten??] (102, 103).

Excellent wine (104).

Good pomegranate wine (šdḥ) of the house [of the Aten?] (105, 106): for šdḥ on seal impressions cf. COA. I, Pl. LV, D: see further, p. 164 below.

Honey of the house of the Aten (107-9): honey is also mentioned on an impression published COA. II, Pl. LVII. J.

110a, b: translation uncertain; pr nfr "the beautiful place", i.e. the place of embalming, seems suspect and should, perhaps, be emended to pr  $h\underline{d}$  "treasury", but pr nfr occurs on an unpublished docket at University College (UC. 24).

Fresh olive oil of the house of the Aten (111-13): no examples of the olive-oil series have hitherto been found.

Good, fresh olive oil (?) [of the house of the Aten] (114).

Sweet olive oil of the house of the Aten (115, and probably 116 also); bik nam is mentioned Anast. IV. 15, 2.

Oil of - - - (117).

118: translation most doubtful and uncertain, unless the signs in the centre are to be read mfkst "malachite", in which case a possible translation might be Green malachite of [the house of the] Aten.

Wine of the treasury - - - - (119).

Treasury of the King's Helper (120–2): for 120 cf. P., Pl. XXI. 45. Gunn suggests<sup>1</sup> that nh nsw is an abbreviation of nh nsw m p; Ttn, "The King's Helper is the Aten", which he further suggests may have been the name of the River Temple.

Wine of the chancellery (124, 125): for 124 cf. P., Pl. XXI. 53.

126-40: fragments of impressions, the majority of which cannot be translated. Among them may be noted: ---- rejoicing in his horizon (126); ---- on Truth (127); [Wine of] Syria (128), so, too, perhaps 129 where  $\frac{1}{6}$  seems strange and should perhaps be  $\frac{3}{4}$ ; Wine of Memphis (?) (131), cf. the somewhat different impression COA. I, Pl. LV. S.

House of Edjō: good (wine): (141).

Edjō, Mistress of Wealth, good (wine): (142, 143). Cf. P., Pl. XXI. 44, where  $\bar{q}$  may be an error for  $\bar{\downarrow}$ .

Edjō, Mistress of Lower Egypt (144-8): for 144 cf. COA. I, Pl. LV. M; for 147 cf. P., Pl. XXI. 42. In 144 ☐ can hardly mean "Gold" or "the Golden One" and must be equivalent, as in Ptolemaic, to ☐, "mistress".

Horus, Lord of Lower Egypt, good (wine): (149).

The people of Lower Egypt (150): cf. P., Pl. XXI. 36; here  $\bigcirc$  is clearly not phonetic and must act solely as a support for rhyt.

<sup>&</sup>lt;sup>1</sup> COA. I. 159. <sup>2</sup> Ibid., Pls. XLIII, Figs. 2 and 6; XXXV, Fig. 5.

<sup>&</sup>lt;sup>3</sup> See also Gardiner, Ancient Egyptian Onomastica, Text, I. 180\* (A. 567).

Very good [wine of the Western River] of the people of Lower Egypt (151): the translation is based on the complete but reversed examples, COA. I, Pl. LV, A; P., Pl. XXI. 35.

Edjō of Lower Egypt - - -, good (wine) (152): cf. P., Pl. XXI. 37.

Designs (153-6): for 154 cf. P., Pl. XXI. 58, and for 156 cf. P., Pl. XXI. 47.

# MUD BRICKS. (Pl. LXXXIII. 1-VIII)

The buildings whose names are recorded on stamped seal impressions on mud bricks are discussed further in Appendix A.

- I. Mansion: clearly an abbreviation of Mansion of the Aten, the name of the Small Temple. Bricks bearing such impressions were found not only in the Small Temple itself but in all the buildings comprising P. 42. 1 (the King's House), P. 42. 2 (the Royal Magazines), and P. 43. 1 (the Priests' Quarters), proving that the whole area was considered as a unit. Other bricks were found in Q. 42. 29 (Eastern Block of government offices, see above, p. 116), for the possible significance of which see p. 181 below.
- II. The House of Rejoicing of the Aten: examples from Q. 42. 25 and one only from R. 42. 6. The only explanation of the occurrence of these bricks in such buildings seems to be that these rooms or houses were occupied by priests or officials attached to the House of Rejoicing (probably, in this context, the Great Palace): see further, p. 181 below.
- III. [The House] of 'Ankhkheperurē' (Smenkhkarē') [in] the House of Rejoicing of the Aten: a few examples from the first two or first four central columns at the north end of the Coronation Hall; careful search failed to reveal any others in other columns (see further, p. 194 below).
- IV. The cartouches of Akhenaten and Nefertiti: from Panehsy's house. The bricks of the estate walls and the outbuildings of the same house were stamped with two  $\frac{9}{1}$  (see p. 26 above), but there appear to be no facsimiles of these.
- V. The Bureau for the Correspondence of Pharaoh l. p. h.: cf. also P., p. 42: the name of the Records Office (Q. 42. 21) from which came very many examples of the name. For Ramesside instances of this Bureau from other sites, see JEA. XXIV. 160, n. 2.
- VI. The House of Life: from Q. 42. 19 and 20 (see above, p. 115). The House of Life has been studied by Gardiner, who concluded (p. 175) that it was "neither a school nor a university, but rather a scriptorium where books connected with religion and cognate matters were compiled". More recently, however, Volten has taken up the question again and has suggested that the House of Life was a kind of school in which books connected with the sacred sciences were studied or copied. Volten points out that the House of Life was concerned not only with strictly religious matters but also with magic, medicine, astronomy, and other "sciences" such as the interpretation of dreams which were linked with religion.
- VII. [The Storehouse] of Service of the Aten: from P. 43. 1 and 2 (the Priests' Quarters); possibly  $\S$  should be restored in the lacuna. This must be the real name of these buildings, the bricks stamped hwt (see above, under I) merely indicating that this storehouse was attached to the Royal Estate (see below, p. 181, for similar use of other bricks). For other bricks inscribed  $\check{s}n\epsilon$  n  $\check{s}ms$ , which cannot, however, be the same building, see COA. I. p. 164 and Pl. LV. vv.

VIII. Translation impossible; from Q. 42. 19.

<sup>&</sup>lt;sup>1</sup> JEA. XXIV. 157-79.

<sup>&</sup>lt;sup>2</sup> Demotische Traumdeutung (Analecta Aegyptiaca, III, Copenhagen, 1942), pp. 17-44.

Finally, in the ruins of an earlier building below the Clerks' Houses 38 and 41 (p. 122 above) were found bricks with much damaged impressions of which only could be read.

## HIERATIC INSCRIPTIONS

(in collaboration with J. ČERNÝ)

The work of editing the hieratic inscriptions has received an added value and importance from the happy circumstance that it was possible to enlist the services of Professor Černý in the collation of all the sherds which had been brought to England. In addition Sir A. H. Gardiner collated all Černý's transcriptions of the texts of 1932–3, but not those of other seasons, and checked my copies of a few other texts which were returned to Cairo before Černý could see them.

Our original intention was an ambitious one. We had hoped to include in this memoir not only transcriptions of all significant ostraca and dockets, but also several plates of facsimiles and also some technical discussion of Amarna hieratic and its forms as well as a detailed commentary on the texts. With this aim in view Černý has examined all the inscriptions from the previous excavations of Petrie and the Society that could be found in this country, except for a few from Professor Griffith's excavations which are now in the Ashmolean Museum. At University College Černý discovered not only the originals of the texts published by Petrie, but a certain number that have never been published or that have been published in part only.1 Wherever it is necessary to refer to these additional texts they are quoted as UC., followed by the numbers given to them in Cerný's note-books. Other texts from Petrie's excavations were formerly in the Amherst collection and subsequently came into the possession of Mr. W. R. Dawson, who published three of them in JEA. X. 133, and who has since presented them to the British Museum.<sup>2</sup> These also Černý was able to copy. This has been singularly fortunate since it is clear that the majority of Petrie's texts must have come from that part of the city which is the subject of this present memoir, and that they have a bearing on and connexion with the inscriptions found in the Society's work.

It must be emphasized, however, that the texts transcribed on Pls. LXXXIV-XCVIII are only those from the Society's excavations in the central part of Amarna between the years 1926 and 1936, and none of the additional texts are included in our plates.

Unfortunately, the outbreak of the War caused us to abandon part of our original plan. Černý was unable to make the necessary facsimiles or to proceed with the autographing of the texts beyond No. 204. The transcriptions, therefore, are our joint work, 1–204 being by Černý, and 205–335 having been autographed by me.

Though the arrangement and form of the plates has been discussed with Černý, he is not responsible for any opinions that may be expressed in the text, for circumstances prevented him from seeing the manuscript. On the other hand, the notes on the transcriptions and most of the transcriptions themselves have been taken from his note-books. Texts which have not

<sup>&</sup>lt;sup>1</sup> P., Pl. XXIII. 38 = UC. 5, lines 2 and 3; P., Pl. XXIII. 39 = UC. 10, line 2; P., Pl. XXIII. 40 = UC. 11, line 2; P., Pl. XXIII. 41 = UC. 9, line 2; P., Pl. XXIII. 42 = UC. 8, line 2.

<sup>&</sup>lt;sup>2</sup> They are now registered under the numbers 59881–958: of these 59947–57 were published in P., Pl. XXV. 91–101, and 59886, 59934 (line 2 only), and 59942 have been published by Dawson (*JEA*. X. 133: Dawson's 6, 53, and 61 respectively): 59934, however, reads sit-nsw and not mwt-nsw.

been controlled by him are marked with asterisks in the plates: one asterisk denotes that the copy is controlled by me, two asterisks that neither Černý nor I have seen the original or a facsimile of it.

In previous volumes in this series different terms have been employed to describe the hieratic inscriptions. Gunn¹ referred to them as "graffiti". In COA. II. 103 ff. I employed the term "ostraca". Neither of these terms seem satisfactory in themselves, and therefore a different course has been adopted. A few of the texts are letters, memoranda, lists, &c.: these I call "ostraca". The majority of the texts, however, simply give the contents of jars and were written on pottery vessels, most of which have become broken in the course of time: these texts, for want of a better term, I call "hieratic dockets".

# 1. Chronology

The excavations have produced no documents that conflict with the accepted ideas of the duration of Akhenaten's reign, and the year 17 still remains the highest known date.<sup>2</sup> It is noteworthy in this connexion that in No. 279 "year 1" is written partly over an earlier "year 17": for the significance of this see below, p. 159.

A problem of another order is raised by two other documents: one is a hieratic docket bearing the date "year 28" (168), and the other a limestone offering-table, from a statue, bearing the names of Amenophis III and Akhenaten and the later form of the doctrinal name of the Aten<sup>3</sup> (Pl. LXIV. 4–6, and Fig. 22 on p. 155). The docket must undoubtedly be assigned to Amenophis III (cf. too the fragment "year 30" from the North Suburb: COA. II, Pl. LVIII. 47), for both the ware and writing are typical of Amarna. The question that imposes itself is, do these and other fragments have any real significance? Do they throw light on a possible coregency of Amenophis III and Akhenaten and its duration?

In a recent study Pendlebury<sup>4</sup> has attempted to prove, or at least to suggest, that this coregency lasted nine or eleven years. Since the two objects just mentioned formed part of his evidence, and since his conclusions, above all on the reliability of the change in the name for dating purposes, have been disputed,<sup>5</sup> it seems as well briefly to examine the whole problem, and, first of all, to deal with the name of the Aten.

The names of the Aten and the changes to which they submitted have been studied by

<sup>&</sup>lt;sup>1</sup> COA. I. 164 and n. 1.

<sup>&</sup>lt;sup>2</sup> The statement by Derry (Ann. Serv. XXXI. 115) that an object dated year 19 had been found at Amarna is incorrect and must have been due to some misunderstanding. Neither at the Royal Tomb nor in any of our excavations at Amarna did we find a regnal date of Akhenaten higher than year 17.

<sup>&</sup>lt;sup>3</sup> For the names of the Aten and the changes they underwent see, in addition to the authorities quoted on p. 153, nn. 1 and 2, the brief discussion on pp. 183, 184 below.

<sup>&</sup>lt;sup>4</sup> Pendlebury, Tell el Amarna, 10-14.

<sup>&</sup>lt;sup>5</sup> Cf. for instance, Drioton and Vandier, Égypte (= Clio: Les peuples de l'Orient méditerranéan, 2), p. 371: "Il n'est pas absolument certain qu'il faille attribuer à l'adoption d'une titulature, une date aussi définitive que ne le fait Pendlebury." Another criticism is that of Cavaignac, Synchronismes babyloniens-égyptiens des XIV<sup>e</sup> et XIII<sup>e</sup> siècles (Kémi, VII. 1-9), who considers that the proportion of the Amarna letters tells against the proposed shortening of Akhenaten's reign: these are arguments which I am not qualified to follow up, but obviously such considerations have a strictly limited value. A different attitude is that of Albright (JEA. XXIII. 193, n. 8), who considers it "certain" that Amenophis III and Akhenaten were coregents, but considers "there is no need to suppose that any of the former's thirty-six years were contemporary with the latter's seventeen".

Sethe<sup>1</sup> and Gunn,<sup>2</sup> and the following details summarize their conclusions. The latest dated occurrences of the early cartouches are found early in the 8th year on the Boundary Stelae.<sup>3</sup> The earliest dated examples of the later form of the name occur in the tomb of Huya at Amarna, where the date "Year 12, 2nd month of winter, day 8" is recorded.<sup>4</sup> It is thus clear that the change took place some time between the years 8 and 12.

Sethe has produced reasons for considering that this change can be dated even more closely, and that it was roughly contemporary with the birth of the fourth princess (Neferneferuaten, the younger), who was born in the year 9 at the latest.<sup>5</sup> In support of this Sethe points out that (a) on the Boundary Stelae in year 8 only three princesses were alive; (b) by the year 12 six daughters of Akhenaten and Nefertiti had been born; (c) in the tomb of Meketaten the fourth princess is shown as a babe in arms, while the name of the Aten is in an intermediate stage, i.e. the name is in the later form, but imi hb-sd is still employed, instead of nb hbw-sd which normally accompanies the later form.

Sethe's argument based on the occurrence of the princesses on the monuments is not as well founded as it once seemed to be. The discovery that Akhenaten married 'Ankhesenpaaten and had a daughter by her<sup>6</sup> necessitates a revision of many of our ideas about Amarna. It is obvious that the marriage must have taken place in Akhenaten's 15th or 16th year at the latest, and the age of 'Ankhesenpaaten at that time becomes a matter of some importance. Although it has been said<sup>7</sup> that girls in Ancient Egypt were married from the age of twelve onwards, it would be unwise to assert that 'Ankhesenpaaten was twelve years old at the time of her marriage, but she could not well have been less. It follows, therefore, that she could not have been born later than year 3 or 4, and her birth was probably a year or two earlier. Unless, therefore, we are to assume a gap of five or six years between the births of Akhenaten's third and fourth daughters, any chronological conclusions drawn from the appearance of the princesses on the monuments are of very doubtful value.

Thus a strong argument in support of the theory that the change in the name of the Aten took place in year 9 must be regarded as suspect. Nevertheless, year 9 still seems to be approximately correct as a working hypothesis that does not contradict the meagre facts that we possess. To place the change in name much after year 9 only creates greater difficulties than it solves.

The essence of Pendlebury's argument in favour of the coregency is that the names of Amenophis III and Akhenaten have been found together on objects bearing the later form of the name of the Aten. This argument, therefore, rightly stresses that such objects are likely to have been inscribed in Akhenaten's 9th year at the earliest, but it does not automatically result from this that Amenophis III was living in that same year. We must therefore see whether this assumption can be substantiated. To do this we must consider two sorts of evidence: (i) two dockets from Amarna which appear to give regnal years of Amenophis III, and (ii) the monuments and objects which associate Amenophis and Akhenaten.

<sup>&</sup>lt;sup>1</sup> K. Sethe, Beiträge zur Geschichte Amenophis, IV (Nachrichten der Kgl. Ges. der Wiss. zu Göttingen. Phil.-hist. Kl. 1921, pp. 101-30). This is quoted hereafter simply as "Sethe", with page number.

<sup>&</sup>lt;sup>2</sup> B. Gunn, "Notes on the Aten and his names" (JEA. IX. 168-76); cf. also COA. I. 148, 149.

<sup>&</sup>lt;sup>3</sup> Year 8, 4th month of winter, day 30, in the additional text of Boundary Stelae A and B, "Year 8, 1st month of inundation, day 8" on stelae S, R, and N (the date of the renewal of the oath).

<sup>4</sup> Davies, III, Pl. XIII.

<sup>&</sup>lt;sup>5</sup> Sethe, 116, note.

<sup>6</sup> H. Brunner, "Eine neue Amarna-Prinzessin", in ZÄS. LXXIV. 104–8.

<sup>&</sup>lt;sup>7</sup> Ibrahim Menascha, "Die Geburtshilfe bei den alten Ägyptern" in Archiv für Gynäkologie, CXXXI (1927), 435.

- (i) A docket of the year 28 is reproduced on Pl. XCI. 168, and another of the year 30 was published in COA. II, Pl. LVIII. 47. It is probable that these dockets refer to regnal years of Amenophis III, but they do not automatically indicate the survival of Amenophis III after the beginning of the reign of Akhenaten. It does not seem likely that empty jars would have been brought to Amarna, while if the jars had first been used under Amenophis III and then re-used under Akhenaten the texts would almost certainly have been palimpsest. Only two explanations seem possible: either the sherds originate from full vessels of wine brought to Amarna after the death of Amenophis III, or they show that he was living when Amarna was occupied. If the former explanation be correct, it must be admitted that the jars found their way to Amarna not less than 7 to 15 years after they were first filled. Neither sherd showed any signs of an internal coating or a slip to make them watertight, and though Lucas has shown1 that similar vessels will hold water for some time without showing signs of leaking, it is quite certain that they were not absolutely impermeable, and it is very doubtful whether they could have retained liquids for more than a few years at the outside. It follows, therefore, that the occupation of the city, which could not have commenced much before the 5th year of Akhenaten (see p. 160), must have been within a very few years of the 28th year of Amenophis III.
  - (ii) Amenophis III is associated with Akhenaten and the name of the Aten:2
- (a) Reliefs of Akhenaten are to be found on the north side of the pylon of the Temple of Soleb. His cartouches on the cornice and in each of the registers show that in every case the name "Akhenaten" is a surcharge, though the other cartouche Nfr-hprw-R W-n-R is original. The pylon was decorated, therefore, before the fifth or sixth year of Akhenaten. The reliefs show Akhenaten before various gods, and once receiving the sign of life from the deified form of Amenophis III (Nebma ē , Lord of Nubia), and again burning incense and pouring libations to his deified father.

Breasted assumed that in these scenes Amenophis III was dead, but such an assumption is by no means obligatory. The cult of the deified Amenophis III was instituted during his lifetime, and on the east face of the north jamb of the east door of the Hypostyle Hall at Soleb Amenophis III himself is shown offering to Nebma'rē', Lord of Nubia. The cult of Amenophis III was certainly not a funerary one, and I have reason to doubt whether it continued after his death. It is probable, therefore, that at Soleb Akhenaten, as king, is shown before his living father and that these scenes are to be dated to the postulated coregency (cf. the scenes from the tomb of Kheruef at Thebes mentioned below, p. 155).

(b) At Aswan a rock relief preserves a double scene.<sup>6</sup> On the right the chief sculptor Men offers to a seated statue of Amenophis III, both of whose cartouches are simply  $Nb-m_{J}ct-R^{c}$ . On the left the chief sculptor Bek, son of Men, is adoring Akhenaten. The figure of the King has been erased and it is impossible to say whether Bek is adoring the King himself or his statue,

<sup>&</sup>lt;sup>1</sup> Lucas, Ancient Egyptian Materials and Industries (3rd edition), pp. 28, 29, and n. 7 on p. 28.

<sup>&</sup>lt;sup>2</sup> In addition to the examples quoted here, see below, p. 205, n. 1.

<sup>&</sup>lt;sup>3</sup> Breasted, "Second Preliminary Report of the Egyptian Expedition", in AJSL. XXV. 87-9.

<sup>&</sup>lt;sup>4</sup> From my own notes of a visit to Soleb.

<sup>&</sup>lt;sup>5</sup> For the cult of Amenophis III see Säve-Söderbergh, Ägypten und Nubien, 203, 204. For a statue "Nebma'rē', Lord of Nubia" see Varille in Ann. Serv. XXXIX. 15 and 16.

<sup>&</sup>lt;sup>6</sup> J. de Morgan, Cat. des Mons. et Inscr. de l'Égypte antique, I. 40, no. 174; W. von Bissing, Denkmäler zur Geschichte der Kunst Amenophis IV (Sitzb. Kgl. Bayer. Akad. der Wiss. Phil.-hist. Kl. 3 Abh.), Pl. I (a rather poor photograph). De Morgan's drawing has recently been reproduced by Varille, Annales, XXXIV. 15, Fig. 2.

though from the publications the erased portion seems the same size as the statue of Amenophis III. The Aten is called *ir hb-sd*, "celebrator of jubilees". Gunn has pointed out that this relief is certainly later than the year 6,<sup>1</sup> and the occurrence of *nb šnnt nb Itn* may indicate that it is not earlier than the latter half of the 8th year (see below, p. 184).

- (c) Griffith has published a slab from Amarna in which Amenophis III is represented as an old and sick man together with his wife Tyi. The cartouches of the Aten are in the later form and the King's name is  $Nb-mict-R^c$  in both cartouches.<sup>2</sup>
- (d) A fragment from the coffin of Meketaten gives the name of Amenophis III ( $Nb-m_{\beta}ct-R^{c}$ ) and Akhenaten ( $Nfr-hprw-R^{c}$   $Wc-n-R^{c}$ ).<sup>3</sup>
- (e) A lintel in the tomb of Ḥuya at Amarna is divided into two scenes:<sup>4</sup> on the right are Amenophis III, Tyi, and the princess Beketaten together with the later form of the name of the Aten; on the left are Akhenaten, Nefertiti, four princesses, and the late form of the name. These scenes, of course, do not associate the two kings with each other, and Ḥuya may have inserted the scenes of Amenophis and Tyi because of his connexion with the latter, for he was superintendent of her harem, treasury, and house. On the other hand, the jambs of the north door of the hall in the tomb of Ḥuya<sup>5</sup> do associate the two kings, giving the late name of the Aten, Nfr-ḥprw-R<sup>c</sup> Wc-n-R<sup>c</sup>, Nb-msct-R<sup>c</sup>, and Tyi in that order.
- (f) On some fragments of a granite bowl found at the desert altars at Amarna<sup>6</sup> are preserved parts of the later form of the name of the Aten, the name of Nb- $m_s$ ct-Rc, and a mention of Akhetaten.
- (g) The names of the two kings occur on a small limestone offering-table (35/570) held on the hands of a statue (Pl. LXIV. 4–6, and Fig. 22). On the under side, between the hands, is the later name of the Aten followed by that of Amenophis III (Nb-ms-t-R). On the sides of the slab are, in front, the name of the Aten twice repeated, on the right the name of Amenophis III, and on the left that of Akhenaten.

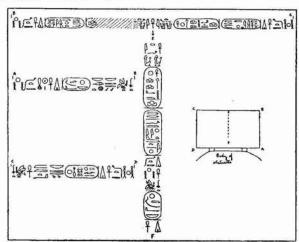


Fig. 22. Inscriptions on a limestone offering-table

- (h) Borchardt has also argued in favour of the coregency on the strength of certain scenes in the tomb of Surere (No. 48) at Thebes.<sup>7</sup>
- (i) In the entrance corridor to the tomb of Kheruef (No. 192) at Thebes, Amenophis IV is shown offering to a seated male figure, behind whom is a female figure that cannot very well be any other but that of Tyi and which is certainly not that of a goddess. Davies, Borchardt, and Fakhry are agreed that the seated figure is that of Amenophis III, although his cartouches are now missing. The dress of the seated Amenophis III is such that it is scarcely possible that we have here either the dead king or a statue of him, and the most probable explanation is that

<sup>&</sup>lt;sup>1</sup> JEA. IX. 171.

<sup>&</sup>lt;sup>3</sup> Bouriant, Culte d'Atonou, p. 15.

<sup>&</sup>lt;sup>5</sup> Ibid., Pl. XXI.

<sup>&</sup>lt;sup>7</sup> Borchardt, Allerhand Kleinigkeiten, pp. 23-9.

<sup>9</sup> Allerhand Kleinigkeiten, 27.

<sup>&</sup>lt;sup>2</sup> Ibid. XII. 1-2, Pl. I.

<sup>&</sup>lt;sup>4</sup> Davies, III, Pl. XVIII.

<sup>&</sup>lt;sup>6</sup> COA. II, pp. 102, 108, and Pl. XLVII. 2.

<sup>&</sup>lt;sup>8</sup> JEA. IX. 135.

<sup>10</sup> Ann. Serv. XLII. 463, 464.

Amenophis IV once more is making offering to his living, deified father (cf. the Soleb reliefs mentioned above, p. 154).

It must be admitted that all this evidence is exceedingly vague and inconclusive. Griffith in discussing (c) considered it to have been made long after the death of Amenophis III as a memorial tablet, and there appears to be a general tendency to consider all these cases in which Amenophis III is associated with the later form of the Aten name as memorials. While this may be true in some cases, in others it cannot very well be so. The memorial theory cannot explain the presence of the name of Amenophis on the coffin of Meketaten. It cannot have been placed there as a memorial to Amenophis himself, and it only becomes reasonable if it be admitted that Amenophis III was alive when Meketaten died. Moreover, supporters of the memorial theory must explain why such "memorials" are found only after the change of the name of the Aten, with the possible exception of the instances in the Theban tombs. Why should memorials to Amenophis III apparently be found only nine years or more after his death, and not in the intervening years?

Finally, there remains the offering-table (g) (Fig. 22). Here not only does Amenophis III receive greater prominence than Akhenaten, but he is mentioned twice to Akhenaten's once (cf. also under (e), the door-jambs from the tomb of Ḥuya). This association of an older king with his son on a single monument is the same type of evidence as, in the case of Smenkhkarēr, has been taken as proof of the coregency of Akhenaten and Smenkhkarēr. If this type of argument is valid in the one case, it is surely possible to argue that there was also a coregency of Amenophis III and Akhenaten, or it must be denied that Akhenaten and Smenkhkarēr were coregents.

There is, however, one other piece of evidence that bears on the question of the coregency. A graffito discovered by Petrie at Medum<sup>2</sup> has been taken by Griffith<sup>3</sup> and Carter<sup>4</sup> to prove that the coregency commenced in the 30th year of Amenophis III, though this has been disputed by Scharff.<sup>5</sup> The graffito in question is clearly dated to the 30th year of Amenophis III, and after epithets and titles proceeds  $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$  while this seems a most unusual way to describe the beginning of a coregency, it is hard to believe it is only a colourless expression; the writing  $\frac{1}{2}$  can surely only refer to the King and not to a commoner, and the infinitive  $\frac{1}{2}$  must imply that the act actually took place in the 30th year. In spite, therefore, of the unusual mode of expression, I am inclined to believe that the graffito must be accepted as recording the commencement of the coregency in the 30th year of Amenophis III.

To sum up this discussion, it is clear that the evidence is very vague. If the Medum graffito be accepted, then the coregency is certain. If it is not accepted, then it is clear there is no certain proof, though I still incline to think that a coregency is the only satisfactory explanation. On the other hand, it must be recorded that apart from the Medum graffito there is no specific inscriptional statement of the coregency, and that there are no double datings known. Moreover, if the coregency began in the 30th year it is clear that Amenophis III must have reigned

<sup>&</sup>lt;sup>1</sup> Newberry, "Akhenaten's eldest son-in-law Ankhkheperurēc", in *JEA*. XIV. 3-9. Cf. also *ZAS*. LXV. 100-2. A hitherto unpublished instance of this association of Akhenaten and Smenkhkarēc occurs on the stela University College 410 (see below, pp. 231, 232, and Pls. CVII. 2, 3; CVIII).

<sup>&</sup>lt;sup>2</sup> Petrie, Medum, Pl. XXXVI (XVIII).

<sup>&</sup>lt;sup>4</sup> Carter, The Tomb of Tut-ankh-amen, III. 3.

<sup>&</sup>lt;sup>3</sup> In ibid., p. 41.

<sup>&</sup>lt;sup>5</sup> Archiv für Orientforschung, X. 87 ff.

at least thirty-eight years¹ unless the change in the names of the Aten has no value for dating. Provided that the Medum graffito can be accepted as evidence, the probability is that the coregency lasted approximately nine years, it is most improbable that it lasted more than eleven years or even as much as that, and I imagine that Akhenaten's second jubilee, the change in the name of the Aten, and the death of Amenophis III all took place within a few months of each other, and probably in that order, all in year 38 of Amenophis III = year 9 of Akhenaten. Such a theory would explain the association of Amenophis and Akhenaten with the late form of the Aten name and the occurrence of memorials to Amenophis inscribed with the late form of the name, and seems the most reasonable interpretation of the known facts.²

It is difficult to decide whether dockets of the years 1 to 4 are to be assigned to Akhenaten or to one of his immediate successors. No. 35 might be assigned to Tutankhamūn, if the reading mschrw be correct and if any value can be attached to this term. No. 279 might at first sight be of either Smenkhkarē or Tutankhamūn (see further, p. 159 below).

Whether the other dockets of these early years are to be assigned to Akhenaten, Smenkh-karē, or Tut'ankhamūn depends on what interpretation can be put upon events at Amarna. Davies<sup>4</sup> has argued that these early years were those of Akhenaten, and has suggested that the large number of oil jars of the year 2 is to be explained by imagining that when work first began at Amarna it was necessary to import large supplies for the workmen. On the other hand, it must be recalled that it has already been pointed out (p. 143) that experience seems to indicate that the products contained in the jars on which dockets were written were for the use of the court and higher officials, while the analysis and discussion of the dated dockets below show that the occupation of the city is not likely to have commenced much before the 5th year.

There is now more or less general agreement that there was a coregency of Akhenaten and Smenkhkarë, though naturally such agreement does not prove the coregency. It is also certain that Smenkhkarë reigned some three years and that he accomplished at least a partial restoration of the old religion at Thebes.<sup>5</sup> It is also known that he was buried at Thebes and presumably he died there also, but it cannot be proved whether he predeceased Akhenaten or not.

In recent years a graffito found at Medīnet Habu<sup>6</sup> has been claimed to prove that the accession of Ḥaremḥab took place in his 27th year and that therefore he included in his reign the years of Akhenaten, Smenkhkarē<sup>c</sup>, Tut<sup>c</sup>ankhamūn, and Ay, which accordingly covered a period of twenty-seven years. If this claim were correct, it is obvious that there must have been

<sup>&</sup>lt;sup>1</sup> Years 37 and 38 of Amenophis III are now authenticated by dockets from his palace at Malkata (Hayes, "La 36e et la 37e année de règne d'Aménophis III", in *Chron. d'Égypte*, No. 47 (Janvier 1949), p. 96 with Fig. 9).

<sup>&</sup>lt;sup>2</sup> Pendlebury (op. cit. 11, 12, 33) apparently overlooked the Medum graffito and the docket of the year 37; he was naturally unaware of the evidence of the Khorsabad King List which fixes the accession of Ashuruballit I at 1362 B.C. (Poebel, Journal of Near Eastern Studies, I. 466), and his dates must be modified accordingly. Note, however, that Rowton (Iraq, VIII. 95, 103) places the accession of Ashuruballit in 1356 B.C. Engelbach's suggested chronology (Ann. Serv. XL. 147), which contains other errors also, must be rejected for the same reasons. Neither can Albright's proposed chronology (JEA. XXIII. 193, n. 8; cf. BASOR., No. 88, Dec. 1942, p. 30 and n. 9) be accepted; Albright is mistaken in denying that Tut-ankhamūn reigned nine years (see now Ann. Serv. XL. 163), and his reliance on the Medīnet Habu graffito (see below) is misplaced.

<sup>&</sup>lt;sup>3</sup> I am unaware of any other Amarna ostraca or dockets on which the term occurs.

<sup>4</sup> JEA. IX. 147, n. 2.

<sup>&</sup>lt;sup>5</sup> Cf. Gardiner, "The Graffito from the Tomb of Pere", in JEA. XIV. 10, 11, and Pls. V, VI, and the authorities quoted above, p. 156, n. 1.

<sup>&</sup>lt;sup>6</sup> Hölscher, Excavations at Ancient Thebes, 1930/31 (OIC., No. 15), pp. 51, 53, and Fig. 35.

a coregency of Akhenaten and Smenkhkarē and that the latter must have died before the former. In the final publication of the graffito, however, Anthes very rightly points out that the text does not and cannot refer to the accession of Ḥaremḥab, who never uses era-dates in his own lifetime. In view of the considerable divergence in the published facsimiles of the final signs of the first line of the graffito, further comment on this text is rather bold, but it is as well to point out that Anthes' revised interpretation of the traces as is distinctly doubtful; in the earlier facsimile the concluding signs would appear to be which, if correct, would indicate that the graffito was written in the 27th year of Ramesses II and refers to a visit to the Temple of Ḥaremḥab; the writing is certainly closer to Ramesside than late Eighteenth Dynasty hieratic.

Thus a certain amount of evidence for the coregency of Akhenaten and Smenkhkarë falls away, and it has to be confessed that once again there is no inscriptional evidence of such a coregency (but see above, p. 156, n. 1) and no recorded instance of a double dating.<sup>4</sup> On the other hand, the known facts do help us to deduce that such a coregency is probable, and my own impression is that it was an actual fact. If there were no coregency it has to be accepted that Smenkhkarë left Amarna and returned to Thebes and began some measure of restoration of the old religion, and on his death Tutankhamūn, though a mere boy, was sufficiently strong not only to reign as a follower of Aten but to leave or keep away from Thebes for three or four years. This is quite incredible: if Smenkhkarë started the move back to the old religion after the death of Akhenaten, it is practically impossible that Tutankhamūn should ever have been strong enough to stop the process. The obvious conclusion is that Akhenaten and Smenkhkarë died within a short time of each other and that Tutankhamūn succeeded Akhenaten.

Tut'ankhamūn's claims to the throne, whatever his parentage may have been, were legitimized by his marriage to 'Ankhesenpaaten, who had married her father Akhenaten a year or two before his death.<sup>5</sup> The marriage with 'Ankhesenpaaten is significant, for it can only mean that at Amarna she was considered as the eldest surviving female of the blood royal, and that Meritaten either was dead or was rejected because of her connexion with Smenkhkarē.

The last stages in the history of Amarna therefore appear to be that the reign of Smenkh-karë was contemporary with the last three years of Akhenaten, that Tut'ankhamūn immediately succeeded Akhenaten and did not go to Thebes until about his fourth year. The result of this inquiry, therefore, as regards the dockets at Amarna is that it is possible that some of the dockets of year 1 are of Smenkhkarë, it is less likely that those of the year 2 are his, and very improbable that any of the year 3 belong to his reign. On the other hand, any of the years 1 to 3, and possibly those of year 4 also, could be years of Tut'ankhamūn. As is indicated below, the dated dockets of the reign of Akhenaten in all probability only begin with the dockets of the 5th year.

<sup>&</sup>lt;sup>1</sup> Hölscher, The Excavation of Medinet Habu: II, The Temples of the Eighteenth Dynasty, 107, 108, Fig. 90 on p. 107, and Pl. 61 (c).

<sup>&</sup>lt;sup>2</sup> The era-date year 59 in the Inscription of Mes (Mes S 8 = Gardiner, *The Inscription of Mes* in Sethe, *Untersuchungen*, IV, Heft 3) is not in a contemporary inscription of Ḥaremḥab. It was only after the death of Ḥaremḥab and in Ramesside times that the years of his "heretic" predecessors were assigned to his reign.

<sup>3</sup> OIC., No. 15, Fig. 35.

<sup>&</sup>lt;sup>4</sup> Albright, *loc. cit.*, is mistaken in stating that there are double datings of Akhenaten and Smenkhkarē<sup>c</sup>. He probably misunderstood Pendlebury's reference to our docket 279 in his report *JEA*. XIX. 117: 279 is palimpsest, but contains no double dating (see below p. 159).

<sup>5</sup> H. Brunner, "Eine neue Amarna-Prinzessin", in ZÄS. LXXIV. 104-8.

If this chain of reasoning be correct, it is now possible to place docket No. 279 in its proper context. This docket does not contain a double dating, since "Year 1" is written over "Year 17". It records, therefore, the first year of an unnamed king which followed the 17th year of another unnamed king. There cannot be any doubt that the latter was Akhenaten. Year 1 can hardly have been that of Smenkhkarë since, as we have seen, his year 1 was probably year 15 of Akhenaten. Thus the docket must be assigned to the first year of Tutankhamūn. This affords some support for the suggestion that dockets of years 1 to 4 are more likely to be of Tutankhamūn than of any other Amarna ruler. This docket also strongly supports the impression that the highest regnal year of Akhenaten was year 17.

If we turn now to consider the light thrown by the dated dockets on the internal history of Akhetaten and its growth and development, it will be seen, as might have been expected, that they tell a story of general occupation different from the history of the North Suburb. In the accompanying table a summary is made of all the dated material from the various parts of the Central City. In addition, as a matter of interest, a separate column has been devoted to a summary of all dated texts from Petrie's excavations to which I have had access. It is very probable that nearly all of these were found in the central portion of the city, and it will be seen

Analysis of Dated Dockets

Year	Great Temple	Temple Depen- dencies	Palace	Royal Estate	Maga- zines	Records Office area	Military and Police Offices	SE. Quarter	Total	Petrie
1	0	1	16	0	14	7	0	0	38	0
1+x	2	0	4	1	1	1	0	0	9	0
2	0	3	4	0	1	1	0	0	9	13
2+x	0	0	1	0	0	1	3	0	5	0
3	1	1	3	0	1	0	0	0	6	3
4	0	0	0	0	1	2	0	0	3	4
5	0	0	5	1	6	0	4	0	16	4
5+x	1	0	1	0	0	1	0	0	3	1
6	0	1	3	1	4	4	4	0	17	1
6+x	0	0	2	0	0	2	1	0	5	0
7	1	0	3	1	8	4	8	0	25	3
8	1	0	3	0	3	3	6	0	16	3
9	1	0	4	3	12	4	7	1	32	6
10	1	0	7	1	2	4	10	0	25	6
10 + x	1	0	4	2	2	3	4	0	16	0
11	2	0	6	1	4	3	1	0	17	5
11+x	0	0	2	0	0	2	2	0	6	0
12	0	1	2	0	4	2	9	1	19	8
12+x	1	0	1	0	1	0	0	0	3	0
13	5	1	1	0	5	4	9	0	25	0
13 + x	0	0	1	0	0	0	0	0	1	0
14	4	0	2	0	4	3	19	0	32	5
15	4	0	2	0	1	3	0	1	11	2
16	1	0	6	1	2	6	1	0	17	4
17	0	0	4	2	3	3	2	0	14	3
28	0	0	0	0	0	1	0	0	1	0
Total	26	8	87	14	79	64	90	3	371	67

<sup>1</sup> COA. II. 103, 104.

that in general they do not conflict with the results of our own excavations. It will be noticed that the figures differ very slightly from the table given in P., p. 32. We have not been able to trace quite all the Petrie dockets, and since we found some differences, the last column of the analysis is confined to the dockets which Černý and I have examined personally. The numerous dockets of year 2 are accounted for by the large number of oil texts found.

A glance at the analysis will show that years 1 and 2 are well represented, that there is comparatively little material for years 3 and 4, but that from year 5 onwards a steady level is maintained. The most reasonable conclusions to be drawn from this are that the central portion of the city began to be occupied from the 5th year or shortly after, and that thereafter, as is natural, it was in continuous occupation. If this inference is correct, the large proportion of dates for years 1 and 2 is to be explained by attributing them to Akhenaten's successors, above all to Tut'ankhamūn (see above, p. 158), and not to Akhenaten himself.

In only one instance did the dated material throw any light on the time at which individual parts were built. During the excavation of the eastern section of the Bridge the brick paving of the ramp was removed and a few sherds were discovered underneath it. Two of these sherds were dated, one being of the year 7 (66) and one of the year 9 (not published). These sherds prove conclusively that the Bridge must have been built in or after the ninth year. This does not conflict with the conclusion reached in Appendix A (p. 196 with p. 185) that the official part of the Palace was built as a whole before the change in the name of the Aten, for it is obvious that the Bridge could not have been built before the buildings with which it was connected, i.e. the Great Palace and the Royal Estate, had been completed.

# 2. OSTRACA

The vast majority of the hieratic inscriptions here published are "hieratic dockets" (see above, p. 152) which were placed on jars to indicate the contents. The only exceptions are Nos. 1–8, 11, 14, 15, 128, 129, 250, 297, 307, 326–30, i.e. only 21 in all out of 337. With the exception of Nos. 128, 129, 331–5, all are written on potsherds. Nos. 329 and 330 are possibly Ramesside in date, the remainder are of the Amarna Period, though No. 1 is, perhaps, suspect.

Nos. 1–3 are letters or fragments of letters. Nos. 4–7, 11, 15, 250, 307, 326–8 are miscellaneous memoranda, lists of men, food, &c. Nos. 8 and 14 are from scribes' exercises. Nos. 128 and 129 are boundary stones. No. 297 is possibly a fragment of a medical text. Nos. 329 and 330 are copies of a Middle Kingdom text.

1. [The scribe NN to?] the scribe Racmose: Do you give 10 deben to Piay and give . . . . 50 . . . . One . . . . . to me whilst I have been here myself standing with you [before the judges (knbt?)]. "Give 50 handfuls of \*swyw to the carpenter", said I to you, but you said to the guardian who kept the \*swyw, "Give them to him."

 examples of this writing do occur at Amarna, and the hand in general is not Ramesside. Some signs are quite typical, above all, the characteristic form of  $\aleph$  with dot below the sign. I am inclined, therefore, to think that the ostracon is of the Amarna period.

The restoration knbt I owe to Gardiner, who points out that che have is always juridic, cf. Anast. VI. 85 (che irm): see also Wb. I. 219. viii. For swyw see Wb. IV. 434: the precise meaning of the word is uncertain: Griffith suggested "melons" (Hieratic Papyri from Kahun and Gurob, Text, pp. 13, 82), and Gardiner has rendered "rushes" (Hieratic Papyri in the British Museum, 3rd Series, Text, pp. 21, 49). In the Kahun Veterinary Papyrus (Griffith, op. cit., Pl. VII. 43) swyw are prescribed for rubbing the eyes, flanks, and limbs of a sick bull: for other instances, which are not very illuminating, see Griffith, op. cit., Pl. XXXVII, frag. lxv. 1, 7; Pap. Ch. Beatty III, rt. 11, 23; V, rt. 8, 4; Anast. IV. 8, 12 = Lansing, 11, 6; Harris, 40a, 10; 56a, 12. For the verb i "to say", cf. Faulkner's paper in JEA. XXII. 177–90, especially p. 184 with reference to the present construction.

- 2. The scribe May of Assiūt to the scribe Maḥu: Write. Do you issue gypsum for the House of Seḥetep-Aten and the House of Nebmacrēc. Kā "gypsum" occurs at Amarna on the gypsum specimens 331–5 (cf. ZÄS. LVIII. 51–2, where other Amarna specimens are published and where other instances of the word are quoted) and on the Boundary Stelae, where it is stated that the inscriptions shall not be obscured (?) with gypsum (Davies, V, Pls. XXV. 22; XXVI. 24; XXVIII). The title kāy "gypsum worker" also occurs at Amarna (COA. II, Pl. LVII. 2, vs. 1). Clearly the text refers to the issue of gypsum for some building purpose, gypsum being used in Ancient Egypt either for mortar or for plaster (cf. Lucas, Ancient Egyptian Materials and Industries, 3rd ed., pp. 12, 94–8, 533, 534). For Pr shtp Itn see the full discussion in Appendix A, p. 198 below.
- 3. Do you open the storehouse and issue 7 hrr. For the construction hnc ntf sdm cf. Gardiner, "An Egyptian Split Infinitive", in JEA. XIV. 86–96: for an Amarna example see COA. II, Pl. LVII. 6. Hrr (hrryry) is apparently a new word, unless it has any connexion with (Wb. III. 330).
- 4. Issued to the Great House, l.p.h., by the hand of the servitor Harnakhte: very good wine in jar(s), 4 mn-vessels, of the capacity of (??) mn-vessels . . . . 1 . . . . together with (?) 1 ms-basket (?); 1 tsi-garment together with (?) [1] ms-basket (?) . . . . . The meaning of šsw is obscure to me: but for the determinative one might be inclined to equate it with the Ptolemaic word  $m \gg 0$  "wine" (Wb. IV. 401).
  - 5. Distribution of corn-rations (?):  $1\frac{1}{2}$  sacks to each of 7 men.
  - 6. Distribution of beer and psn-loaves.
- 7. Possibly from a list similar to Nos. 5 and 6. For the title *mr rwyt* cf. Wb. II. 407. 14 = Belegstellen, p. 603. I know of only two other examples of this title at Amarna, see Pl. CIII. 49, and Davies, III, Pl. XXVII (Tomb of Ahmose).
  - 11. Fragment of uncertain import, apparently concerned with quantities of liquids.
  - 15. Possibly from a list similar to Nos. 5 and 6.
  - 250. Provisions: bull (?) of Prec.
- 326-8. Fragments of lists and quantities of various products, 326, 327 being of vegetable products for the House of the Aten in Akhetaten.

<sup>&</sup>lt;sup>1</sup> See further, Gardiner's observations in his Ancient Egyptian Onomastica, Text, I. 63\*.

8 and 14. Scribe's or schoolboy's exercises (?).

128, 129. Fragments of hieratic inscriptions on boundary stones (see above, p. 113), 128 being from Q. 42. 32 and 129 from Q. 42. 33. 128 reads: . . . . west of the bureau (?) of the royal scribe Ahmose . . . 129 reads: . . . north east of the bureau (?) of the town of the Aten. . . . .

297. A fragment from a medical (?) text: the first line possibly read [anoint (?)] the patient with the fat of cattle.

307. Parennufer, son of Hesefemon (?), his mother being Iuy of Hermopolis. The name of the father is probably to be emended Ḥs·f m Iwnw, as in 185. The text occupied a single line on a pot and was complete: above it were a number of confused and meaningless scribbles.

329, 330: these are examples of a peculiar type of New Kingdom ostracon of which examples were published by Wilson in Mélanges Maspero, II. 901-5, cf. especially p. 902, where there are several of the same phrases as in 329. More recently other examples now in the Metropolitan Museum of Art have been published by Hayes, who considered they were copies of an early Middle Kingdom letter made by a student scribe of the Hyksos period. It is to Posener that credit must be given for recognizing the true nature of these ostraca. In an appendix to a recent monograph by van de Walle, Posener points out that these are copies made by student scribes of the New Kingdom, and particularly in Ramesside times,3 of the long-lost book Kmyt, an obviously once popular work of Middle Kingdom origin previously only known to us from references to it in Pap. Sallier II, 4, 3 and Pap. Chester Beatty IV, vs. 6, 11.4 Posener, who is preparing to publish a reconstitution of this lost work, has kindly informed me that No. 329 gives the greater part of § IV of Kmyt and that No. 330 is equivalent to § VII of the same work. While our two Amarna ostraca give some useful variants, their main interest lies in their date and provenance. They are additional proof of the great popularity of Kmyt. Moreover, as Posener has also remarked to me, the occurrence of the date "day 16" in No. 329 proves that they are the work of students.

<sup>&</sup>lt;sup>1</sup> Hayes, "A much-copied Letter of the Early Middle Kingdom", in *JNES*. VII. 1–10. Our No. 329 is a duplicate of lines 3–4 of Hayes's ostracon 35144 (*loc. cit.*, Pl. I, and transcription facing it), and 330 is a duplicate of lines 8–9 of Hayes's ostracon 36112 (*loc. cit.*, Pl. II, and transcription facing it).

<sup>&</sup>lt;sup>2</sup> Annexe I to B. van de Walle, La Transmission des textes littéraires égyptiens (Brussels, 1948), pp. 41-50.

<sup>3</sup> As long ago as 1939 Gardiner pointed out to me that all ostraca of this class known to him were Ramesside copies of Middle Kingdom texts and that Wilson erred in thinking them really of Middle Kingdom date.

<sup>&</sup>lt;sup>4</sup> Brunner, Die Lehre des Cheti Sohnes des Duauf (Glückstadt, 1944), 26, 82-4.

#### 3. HIERATIC DOCKETS

#### A. WINE SERIES

Under this head I include not only the dockets that refer to *irp* "wine", which are in the great majority, but also a number of other beverages such as *šdḥ*. In many of the dockets the name of the contents has been lost, but in most cases the formulae show that they belong to the wine series. The following numbers are certainly of the wine series: 16–20, 22–5, 28–40, 42–81, 83–123, 125–7, 132–56, 158–71, 173–8, 190, 237, 279 (second text), 322; the following are doubtful, but since they are even less likely to belong to the meat or miscellaneous series, I include them under wine: 21, 26, 27, 41, 82, 124, 130, 131, 172, 308, 324: in all, 165 dockets out of a total of 335 ostraca and dockets.

The formulae naturally show some variation, but the normal text gives a date, the name of the beverage, the "house" or "estate" to which it belonged, the locality from which it originated, and the title and name of the vine-dresser or responsible man. The few exceptions and some special points are dealt with at the end of this section.

- (a) The Date. The name of the king is always omitted. Only in one instance (111), and even then the season is omitted, is a month added. Only one other instance of such a dating in a docket of the wine series is known (COA. I, Pl. LXIV. 3, where both season and month are given). Such details are somewhat more common in the meat series. The additional phrase  $\overline{\odot}$  X  $n \ hrw \ X$ , which is found in some of the Ramesseum dockets ( $Z\ddot{A}S$ . LVIII. 27, 28, 35), never occurs at Amarna.
- (b) The Beverages. By far the most common is irp "wine", which occurs 99 times and which undoubtedly was present originally in most of the damaged dockets. Trp can be qualified by the epithets nfr "good" (20, 42, 51, 71, 101, 108 (?), 160; see also P., Pl. XXIII. 43 (?); COA. II, Pl. LVIII. 17: also occurs on jar sealings 17, 25, 50, 152, cf. P., Pl. XXI. 4; COA. I, Pl. LV. I. S); nfr nfr "very good" (70, 93, 173, 237, cf. 4; see also COA. I, Pls. LXIII. S, LXIV. 22; P., Pl. XXII. 1, 3, 28, XXV. 94 (?); and on two unpublished dockets from Professor Griffith's excavations: on jar sealings see 33, 51, 52, 98–101, 151; also P., Pl. XXI. 11–13, 35; COA. I, Pl. LV. E, CC; COA. II, Pl. LVIII. A); mir "genuine" (115, 118; cf. COA. II, Pl. LVIII. 17; also occurs on jar stoppings 53–60; P., Pl. XXI. 7 (?), 23; COA. I, Pl. LV. AA, BB, CC); ndm "sweet" (165, 166, 167; cf. 175).

In one case we find the phrase n high n for merry-making" (?) added (174). Peet has devoted a brief note to this epithet (JEA. XIV. 182) and has quoted two further instances. Žerný has drawn my attention to a fourth, hitherto unpublished example:

The translation "wine for merry-making" is quite uncertain.

<sup>&</sup>lt;sup>1</sup> Or perhaps "for offerings" (?), as the word has been rendered in COA. I. 162.

<sup>&</sup>lt;sup>2</sup> T. E. Peet, "The Egyptian Writing-board BM. 5647, bearing Keftiu Names", in *Essays in Aegaean Archaeology* presented to Sir Arthur Evans in honour of his 75th birthday; Schiaparelli, *Relazione sui lavori della Missione Archaeologica Italiana in Egitto*, 1903–20, vol. II, p. 153.

<sup>&</sup>lt;sup>3</sup> From a docket discovered by Varille and Robichon in their excavation of the temple of Amenophis son of Hapu. I am indebted to Černý, who will publish the texts of the dockets, for knowledge of this text and for permission to quote it.

The dockets also record the following beverages:

nfr (175): according to Wb. II. 261 = Belegstellen, p. 383, this name has hitherto only been found in Ptolemaic texts as a designation of wine and beer.

hnkt cm; (176): according to Wb. I. 185 cm; occurs in Ptolemaic texts as the name either of beer or of a jar for beer; we appear to have here, therefore, either "cm;-beer" or "beer, cm;-jug(s)": if the latter be the correct translation, it would be better to include this text among the ostraca. Amarna dockets only preserve one more instance of beer: hnkt smht rswt "beer that ignores awakening" on an unpublished docket from Professor Griffith's excavations.

crm (177): is not listed in the Wörterbuch.

šdh "pomegranate wine" (45, 178, 190): occurs P., Pl. XXIV. 63, 64, 65 (?); COA. I, Pl. LXIV. 74 = BM. 55702, COA. II, Pl. LVIII. 30 = BM. 63521, and 31, and on jar sealings 105, 106, and COA, I, Pl. LV. D. The examples just quoted show that šdh, like irp, can be qualified by the epithets nfr and nfr nfr.

For šdh "pomegranate wine" see Keimer, Die Gartenpflanzen im alten Ägypten, pp. 51 and 152; Lutz, Viticulture and Brewing in the Ancient Orient, pp. 9, 17–18; Calice, Grundlagen der Ägyptischsemitischen Wortvergleichen, p. 209, No. 865a; Gardiner, Ancient Egyptian Onomastica, Text, II. 235\* (A. 564). According to a verbal communication from Dr. Keimer to Dr. M. Korostovtsev, šdh was prepared from punica granatum.

- (c) The Estates. A detailed discussion of the "houses" or "estates" will be found in Appendix A. The following estates are mentioned in the present series of dockets:
  - 1. The House of Nebmarrër (Amenophis III) in the barque (16): cf. the unpublished docket 24/629 = BM.57464 + 57466.
  - 2. The House of Nebmarrer (17, 18).
  - 3. The Mansion of Nebmarrer (19, 20).
  - 4. [House of] Tyi (21).
  - 5. House of Akhenaten, the long-lived (22-6): perhaps also 27 with the variant king [Akhen]-aten.
  - 6. House of Nefertiti (28-30).
  - 7. - [of the Royal] Wife, which is in Akhetaten (33).
  - 8. House of Smenkhkarer, justified (35).
  - 9. House of 'Ankhkheperure' (Smenkhkare') (36).
  - 10. House of the princess Meketaten (37, 38).
  - 11. House of the princess Meritaten (39, 40).
  - 12. [House] of the princess Ankhesenpaaten (41).
  - 13. House of Aten-gleams (Amenophis III) (237).
  - 14. House of the princess Baketaten (42): Baketaten was a daughter of Amenophis III and Tyi.
  - 15. House of Re-Harakhte (43-6).
  - 16. Mansion of the Aten (47-54, 134 (?), 173). 47, 54, and 134 give a fuller form of the name Mansion of the Aten in Akhetaten, 54 and 134 being completed by 47. 49, with which compare 173, appears to differ from the normal formula. See also 159, 165, and perhaps 156, 158.
  - 17. House of the Aten (55-89, 146, 154 (?), 171(?)).
  - 18. House of Rejoicing of the Aten (90).

- 19. House of Ankh-Aten (91–103, 105, 106): this is probably only a variant of Pr Itn (see below, p. 169). 99 is perhaps House of Ankh-Rēc.
- 20. The Sunshade of - - which is in Akhetaten (107).
- 21. The Sunshade of Ankh-Rec of - - (108, 109, 110 (?)).
- 22. House of him who propitiates the Aten (111-14).
- 23. House of Appearance (?) (115): perhaps a name of the Coronation Hall.
- 24. House of the High Priest (wr msw) of the Aten (116-20).
- 25. House of the Overseer of the Seal (?) (122; perhaps 121 also).
- 26. House of Amūn in Thebes (140).
- (d) The Sources of the Wine
- (i) By far the most frequently mentioned source is the Western River, which is the Canopic branch of the Nile (Gardiner in JEA. V. 130–1; Gauthier, Dict. des noms géog. I. 118;  $Z\ddot{A}S$ . LVIII. 29). In the present series it occurs clearly 46 times and is undoubtedly to be restored in the majority of the other examples. In most cases, it would appear,  $itrw\ imnti$  is linked with the preceding name of an estate by the genitive n, but occasionally m is substituted for n (50: cf. COA. I, Pl. XLIV. 4; P., Pl. XXII. 20; BM. 59932; and two dockets from Professor Griffith's excavations, BM. 57461, 57468; perhaps also COA. II, Pl. LVIII. 24), and once both m and n are omitted (111).

In the normal formula n itrw imnti, as we have seen, follows the name of the estate, but in a few cases it comes immediately after irp (139-45, 165 (itrw alone with omission of imnti), 237; cf. P., Pls. XXII. 15; XXIV. 89). In such cases the formula is apt to vary: in some instances the name of the estate seems to be omitted altogether and itrw imnti is followed by a title and personal name (139, 143; probably also 142, 144, 145); or the name of an estate follows itrw imnti (140, 237, and probably P., Pl. XXIV. 89); or it is followed by the name of a bch "basin" (165, cf. P., Pl. XXII. 15: these examples seem to be similar and the complete formula appears to be n ( $p_i$ ) bch rsi n ts  $Hwt-p_i-Itn$ ). The construction of 141 is obscure, but it clearly differs from the others: see below (ii), 12 (p. 166).

No. 18 differs from all the above-mentioned dockets. The apparent translation would be "the oases which are in the Western River". If this translation were correct, it would surely imply that the term "Western River" included a much wider area than the Canopic branch. Since there is no other evidence in favour of such an assumption I am inclined to think that compared to the compared white "oases" but that it is a writing of either withywt (Wb. I. 258) or white (Wb. I. 346) "villages" (cf. JEA. XXVII. 57, n. 2 and more fully Gardiner, The Wilbour Papyrus, II. 32, 33). I know of no Eighteenth Dynasty spellings similar to this, but it is well authenticated in Ptolemaic in such forms as and the compared compared to the compared with the compared to the compar

- (ii) In addition to the Western River, the wine is said to have come from the following places:
- Selle (123): cf. COA. I, Pl. LXIII. N; see also JEA. V. 244, n. 1; Quibell, Ramesseum,
   Pl. XI, No. 19; ZÄS. LVIII. 32.

2. The Southern Oasis (71, 124, 126, and possibly 64): see also COA. I, Pl. LXIII. K; COA. II, Pl. LVIII. 29 = BM. 59379; P., Pl. XXV. 94 = BM. 59950; UC. 38. 64 and 71 give the further detail "of the vineyard of N"; UC. 38 substitutes m for n, "House of the Aten in the Southern Oasis"; in 126 restore  $\diamondsuit$ , as in 64, "from the Southern Oasis", cf. P., Pl. XXV. 94, which also preserves the unusual grouping of 126. The Southern Oasis is El Kharga (Gauthier, op. cit. I. 203).

The Northern Oasis (El Baharia) is not mentioned in the present series of dockets, but occurs once in an unpublished docket from Professor Griffith's excavations, and grapes of the Northern Oasis are mentioned COA. II, Pl. LVIII. 37.

- 3. Sz-whit (51): the ancient name of the modern village of Mut in Dakhleh Oasis (Gardiner in JEA. XIX. 24; Gauthier, op. cit. V. 3): the docket mentions a vineyard belonging to the village.
- 4. Memphis (127): cf. P., Pl. XXV. 93 = BM. 59949. Memphis is probably mentioned on the jar-stopping 131 and COA. I, Pl. LV. S. An unpublished docket 22/213 = BM. 55639 mentions Memphis in a somewhat different context: the text possibly refers to a vineyard (?) (only the determinative  $\Box$  is preserved) in Memphis; cf. the vineyards in the Southern Oasis (64, 71) and in  $S_3$ -whit (51).
  - 5. Hpšyt (324): cf. Mélanges Maspero, II. 494; Gauthier, op. cit. IV. 174.
- 6. △ ♣ ☐ ☐ (167: revised reading, cf. facsimile Pl. XCVIII): occurs again on an unpublished wine jar from the tomb of Tut ankhamun.
  - 7. The Northern District (130, 131).
- 8. The Western Side (102): cf. Spiegelberg, Hieratic Ostraca... from the Ramesseum, Nos. 161, 176, 186, 209, 217, 221; ZÄS. LVIII. 29; Harris 51a, 5; 51b, 4-5; JEA. V. 130. The text is possibly to be completed to wot imntt [n mw imntt].
- 9. The Eastern Side (308): probably to be completed to wit libth n mw [libth], for mw libth see 278 (honey). Pr-hbyt, which is also mentioned on this docket, is Behbeit el-Hagar (Gauthier, op. cit. II. 41).

The Western Side and the Eastern Side would appear to be designations of the western and eastern margins of the Delta, and may perhaps be synonymous with ps rd imnti and ps rd isbti respectively (cf. JEA. V. 259 and nn. 2 and 3).

- 10. \*\*Samily \*\* [1.5] \*\* [2.5]
- 11.  $\mathbb{R}$  is the northern village" (79: cf. 59, 63): for the spelling is whyt cf. Anast. V. 22, 2; 27, 5; JEA. V. 259. See also the note on 18, above, under (i) (p. 165).
- 12. Another geographical name is  $\bigcup_{i=1}^{\infty}$  (141), the mountain marking the southern limit of the world (Gauthier, op. cit. I. 194–5). In spite of the words "from Wp-tr", this can hardly be a source of wine because of its position in the docket and because the wine is said to be of the Western River. I am unable to suggest a suitable restoration or to offer an explanation of the occurrence of this name.
- 13. Whether we are to see in the word rmnyt "domain" (65, 70, 83) an indication of the source of wine is doubtful, but it seems best to note its occurrence here. For 65 and 70, which

read "wine of the House of the Aten of the domain of the agent Ḥori", cf. P., Pl. XXII. 27 which, like 70, is of the year 9. For rmnyt "domain" see JEA. XXVII. 41-2; the word has been discussed in full by Gardiner, The Wilbour Papyrus, II. 110, 111.

- 14.  $\frac{1}{\pi}$   $\frac{1}{2}$   $\frac{1}{2}$ 
  - 15. Other incomplete or obscure place-names occur in 58, 61, 125, 177.
- (iii) In some cases the dockets specify the vineyard (k m w) or basin (b c h) from which the wine came.

Kimw "vineyard": in 147 wine of the vineyard of . . . . . of the Western River is mentioned. In view of COA. I, Pl. LXIV. 27 = BM. 55653 it is probable that Pr-Itn should be restored in the lacuna. A vineyard belonging to the village of Si-whit in Dakhleh Oasis is mentioned in 51. Elsewhere the vineyard, in each case probably in the Southern Oasis, is followed by the name of the man to whom it belonged (64, 71).

Bch "basin". The dockets mention Wine of the basin of the Mansion of the Aten (159; perhaps 156, 158 also), and Wine of the Western River of the basin [of the Mansion of] the Aten (165; cf. P., Pl. XXII. 15 with variant "of the southern basin of the Mansion [of the Aten]"). In 190 the šdh is of a basin other than that of the Mansion of the Aten, the definite article p; showing that t; hwt p; Itn is impossible. 32 is uncertain, but undoubtedly differs from the other dockets. Note the reference to the "basins" in 157, which, however, does not belong to the wine series.

The meaning of bch has been discussed briefly, COA. II. 105. My suggestion that the southern basin of the Mansion of the Aten was probably at Amarna is, I now think, mistaken, and it is probable that the basins were in the district of the Western River. It would appear from the study of the dockets that there were two categories of vineyard or basin: some were devoted exclusively to a particular estate (147, 159, 165, 190, and COA. I, Pl. LXIV. 27), while others belonged either to a community, a village (51), or to private individuals (64, 71): it may be presumed that the products of the latter class may not necessarily have been available to one estate alone.

(iv) To summarize the results of this study of the sources it is clear that the wine at Amarna was not of local origin.<sup>2</sup> In the great majority of cases it was of Lower Egyptian origin, a conclusion which is supported by the impressions on jar-stoppings 81–3, cf. also stoppings 141–52. By far the greater part of the Lower Egyptian wine came from the district of the Western River, but some came from the eastern margins of the Delta. Other wine was produced by oases of the western desert. Note also that jar-stopping 128 apparently records "[wine of] Syria".

This generalization may have one exception in 190. The formula of this docket is unique and is so incomplete that any attempt to interpret it is bound to be uncertain. It would appear, however, that the words idhw n iht-cnh-itn are connected with pi bch n pi . . . . as the source of the idh. If this assumption is correct, the source was "the basin of the . . . . . [in?] the marshes of Akhet'ankhaten", which must surely have been a place in the Amarna district. The idhw could not have been on the east bank, and I am inclined to place them to the west of

<sup>&</sup>lt;sup>1</sup> Gardiner, Ancient Egyptian Onomastica, Text, II. 215\* (A. 458).

<sup>&</sup>lt;sup>2</sup> Engelbach's suggestion (Ann. Serv. XL. 164) that the explanation of the absence of years 6, 7, and 8 from the dated wine jars from the tomb of Tutankhamun may be that after the vintage of year 5 the vines were transferred from Amarna to Thebes is obviously untenable.

the Bahr Yusef. Even to-day to the west of Dirweh and between that village and the edge of the desert there is a large area which is flooded and marshy for a certain part of the year. This lies well within the area delimited by the boundary stelae on the west bank and may well have been the "marshes" of Akhetaten. This docket, it may be remarked, is also noteworthy for the unique variant Akhetrankhaten.

(e) Names and Titles. Full details of all the names and titles contained in all the inscriptions published in this volume are given below, pp. 176–80. The following observations, therefore, are confined to such titles as are connected with the wine series.

The most frequent title is hri krmw "master of the vineyard" which is found on 43 dockets.¹ The variant hri krmyw² "master of the vine-dressers", which in Ramesside times becomes the normal one (cf. Spiegelberg, Hier. Ostr. &c., Pls. XIX-XXXV passim: hri krmyw 59 times, hri krmw 4 times), only occurs in the present series 6 times (for other Amarna examples see COA. I, Pl. LXIV. 29; COA. II, Pl. LVIII. 24; BM. 58889, 59886, and two dockets from Professor Griffith's excavations, one of which is now BM. 57457): for the spelling of the title in 85 cf. Spiegelberg, op. cit., Nos. 140, 165, 207, 213, 239, 265, 274, 285. Hri bch "master of the basin" occurs 23 times. In a few cases hri krmw, hri krmyw, or hri bch is omitted, and in its place appear krmy "vine-dresser' (7 times; see also P., Pl. XXII. 8; BM. 55636, 55674, 63520), r n bch "chief of the basin" (160; cf. P., Pl. XXIV. 90; BM. 57461, 59887, 59918 (?)), sš nsw "royal scribe" (48, 123), sš "scribe" (169), or srw "guardian" (49; cf. also 173). Occasionally all titles are omitted and the personal name is preceded simply by m drt "by the hand of" (31, 73, 77, 111, 112; cf. BM. 57463).

(f) To conclude this discussion of the wine series I add some notes on various points which have not already been dealt with.

The first point is the word  $\stackrel{\frown}{\circ}$  "tithe". In the present series this word occurs four times in the wine series (22, 135-7), once in the meat series (235, possibly to be restored in 229, 230), and once under "honey" (284). Other Amarna examples are COA. I, Pl. LXIV. 1-5 (1 is probably BM. 55688, 2 = BM. 55667 + 55668), BM. 59378, 59934, and UC. 18, all apparently from wine jars.

It is unfortunate that all these dockets should be so incomplete, for there is no information from other sources concerning a "tithe" in Ancient Egypt, and there is little to tell us of what it consisted, how it was levied, or to what purpose it was devoted.

<sup>&</sup>lt;sup>1</sup> For references to the occurrence of this and the other titles in this volume see the index of titles below, pp. 179, 180.

<sup>&</sup>lt;sup>2</sup> For k3my see Gardiner, Ancient Egyptian Onomastica, Text, I. 96\*, 97\* (A. 224, 225).

The name  $(P \setminus P)$  is clearly only a variant of  $(P \setminus P)$ . This is shown beyond all dispute in the tithe dockets (compare 22, 136, UC. 18, BM. 59378 with 284 and BM. 59934). In origin the variant may have been regarded as an abbreviation of the name of the Aten as is probable in the case of the name only Rc (cf. COA. I. 167).

- 94.  $S_k^ib$  is puzzling: from its position in the docket one would expect this to be a placename, but I know of no such name. To take it as descriptive of the wine,  $n s_k^ib$  "for cooling", does not seem probable since it is separated from irp.
- 146. The spelling  $\bigcirc$  is rare, but does occur occasionally on dockets (see P., Pls. XXII. 31; XXV. 92, an unpublished docket (No. 140) from the 1936–7 excavations and another docket (24/112) from Professor Griffith's excavations). Such writings are undoubtedly influenced by such forms as  $\bigcirc$  which occur on jar stoppings for  $Pr\ Itn$  (e.g. jar stoppings, Pl. LXXXI. 42–8).
- 171. Restore  $r \not s i m \not h b [sd]$ : this is probably the name of a vineyard and not a personal name. I know of no other instance at Amarna of a vineyard having a name, but the same name occurs at the Ramesseum (Spiegelberg, op. cit., No. 174;  $Z \ddot{A} S$ . LVIII. 32).
- 322. The expression  $\frac{q}{10}$  is unusual and puzzling. The docket is undoubtedly one of the wine series, but is too fragmentary to enable a reconstruction of its content to be made. As it stands  $\frac{q}{10}$  can hardly be other than an epithet of the Aten and is strongly reminiscent of  $\frac{q}{10}$  by tpy (Wb. III. 220) which occurs in Middle Egyptian and in Ptolemaic. In Ptolemaic it is an epithet of Horus the Behdetite and the King. The meaning is doubtful and is the subject of a note by Professor A. M. Blackman and myself in JEA. XXIX. 20, n. 5. The literal translation appears to be "He of the First Lotus-leaf", i.e. "the primeval one", and may be somewhat similar in meaning to privity tpy. If this suggestion be correct, the epithet as applied to Aten would be the logical outcome of the conception of the Aten as the origin of all life and activity, although I am not aware of any other instance in which Aten is actually called a primeval god. It is worthy of note, moreover, that the Ptolemaic examples quoted in the above-mentioned note indicate that  $H_I$  tpy was Shu between whom and the Aten there was a close connexion (cf. the early form of the didactic name).

### B. MEAT SERIES

Under this head I include not only the dockets which specifically mention meat, but also dockets dealing with such products as  $c\underline{d}$  (fat) and gnn (suct?) whose formulae connect them with the meat series. The series comprises the following numbers: 9, 10, 12, 13, 179–89, 190a–236, 237a–49, 251–67: 92 dockets in all. These may be subdivided into (a) lists of meat: 9, 10, 12, 13, 183, 184, 217, 253; (b) meat dockets: 179–82, 185–9, 190a–216, 218–33, 241–4, 248, 249, 251, 252, 254, 255; (c) other products: 234–6, 237a, 240, 245–7, 256–7.

The formulae of the meat dockets are not capable of such comparatively simple analysis as those of the wine series, for though the sources and estates are far fewer, the combinations in which a relatively restricted number of words can occur seem almost infinite. The question is complicated by the fragmentary state of the material and by the great uncertainty which attends the translation of the keywords *iwf dr*, *iwf d-r*, *d-r*, *mswt*, and *ihyt*. Before proceeding with the more detailed study of the individual dockets we will, therefore, discuss these words.

(i) In addition to the familiar iwf dr, which has been known as a variety of meat since the

first meat dockets were published in P., Pls. XXII. 44–57, XXIV. 87, XXV. 99, and which also occurs in a docket of the reign of Amenophis III from his palace south of Medinet Habu and in unpublished dockets of the same reign from the temple of Amenophis son of Hapu, the present series contains a new variety. In this new name the second element, which can occur with or without a preceding iwf, has the spellings iwf = ixf = ix

The translation is exceedingly doubtful and both "boned" or "pounded" meat have been suggested as possibilities. In view of 217, however, it is difficult to accept either of these suggestions, for the meat is clearly in joints of various kinds and it is these joints which are the iwf dr. The suggestion of Wb. V. 475 that this was "pickled" meat seems most likely, and we accordingly translate "preserved (?)", and leave it quite open whether the meat was salted or dried or "pickled" in some other way.

There can be no doubt that the treatment of this preserved meat was undertaken in the  $Pr\ Itn$ , taking this name in its widest sense as including not only the Great Temple but also the official palace (see below, p. 195). It does not seem too fantastic to suggest that perhaps the manufacture and supplying of the preserved meat was a monopoly of the  $Pr\ Itn$ .

- (ii) Mswt-Itn. Although there are a number of unimportant differences, for all practical purposes the formulae in which the phrase Mswt-Itn appears can be reduced to two:
  - 1. iwf dr n Mswt-Itn n shyt (218 and P., Pl. XXIII. 44); with variant iwf dr Mswt-Itn (P., Pl. XXIII. 49; COA. I, Pl. LXIV. 75, 77-9, 82).
  - 2.  $iwf dr n hb Itn m Mswt-Itn n \left(\frac{ibyt}{snc}X\right)$ : no complete example of this formula is known on meat-jars proper, but it occurs in our 262 (fat) and may be deduced from a comparison of the meat-jars 186, 187, and 223. The following variants occur: m is omitted (229);  $Mswt \ n \ Itn \ (187)$ ;  $[n] \ ti \ ibyt \ (263)$ ;  $[m \ Mswt]$ -cnb- $Itn \ (P., Pl. XXIII. 46)$ ;  $bb \ cnb$ - $Itn \ (192; 211; P., Pl. XXIV. 87; BM. 59895).$

Griffith<sup>2</sup> suggested that the phrase meant "children of the Aten", while Gunn,<sup>3</sup> following a suggestion by Spiegelberg,<sup>4</sup> proposed somewhat tentatively "oxen (?) of the Aten". Gardiner, on the other hand, in a letter to me has asked whether *Mswt-Itn* could not be "the birthday of the Aten" as the Amarna equivalent of Mesore.

Gardiner's suggestion certainly appears to be nearest the truth, for the phrase m Mswt-Itn speaks against the translations of Griffith and Gunn and seems to indicate some temporal meaning. It will be noted, moreover, that n Mswt-Itn is parallel with n hb Itn, the preserved meat being "for the Birthday of the Aten" or for "the festival of the Aten on the Birthday of the Aten".

If, however, Mswt-Itn is to be equated with Mesore, it would be natural, in those dockets which give a month, to expect the entry "fourth month of Summer". This date is never

<sup>&</sup>lt;sup>1</sup> Differs in other respects, however, from the two dockets just quoted.

<sup>&</sup>lt;sup>2</sup> P., p. 33.

<sup>3</sup> COA. I. 167.

<sup>&</sup>lt;sup>4</sup> Kopt. Handwörterbuch, 302.

recorded in any dockets known at present and the actual dates are somewhat confusing and contradictory:

- 259: "Year 1, 1st month of the Inundation, fresh fat n Mswt-Itn".
- 244: "Year 1, 2nd month of the Inundation, - - m Mswt-[Itn]".
- 229: 1st (?) day of an unknown month of the Inundation (?).
- 191: "the festival of the Aten m Mswt-[Itn]", followed (perhaps after a very small lacuna) by the date, 21st day of an unknown month of Winter.

These dockets appear to indicate that if *Mswt-Itn* be the "Birthday of the Aten", it cannot be a month-name, for it occurs in at least three different months. The evidence is admittedly very meagre, too slender to justify any binding conclusions, but it is at least permissible to make the following suggestions and to hope that eventually the evidence will be found that will solve the problem:

- (a) Mswt-Itn is the name of a specific day.
- (b) There was a day of this name in each month.
- (c) On this day a festival of the Aten was celebrated.1
- (d) It may have been the 21st day of the month (leaving docket 229 out of consideration as being too uncertain).

The shyt was a room or building attached to a number of houses or estates, including Pr Itn (185, 186, 194, 199, 200, 215, 216, 220, 224, 228-31, 248, 259, 262; see also COA. I, Pl. XLIV. 82 = BM. 55665; 83; P., Pls. XXIII. 47, 51 (?), XXV. 99; BM. 59905); note also the variant shyt Itn (P., Pl. XXIII. 57); Pr cnh-Itn (180, 211?); Pharaoh (192, 202, 213, 223, 234; P., Pl. XXIII. 46, 48); the Queen (245, and perhaps also 208, 246, 247, 265). Occasionally all mention of a house is omitted after shyt, which is then either said to be of an official (P., Pl. XXIII. 44, 56) or under his charge (190a, 196, 197, 251, 252, 253 (?)).

In addition to all these, the dockets (though none of those of the present series) show that there was an *jhyt* of the building called  $K_{J-n-r}h_{J-R}$  (all from the 1922 excavations: COA. I, Pl. XLIV. 75, 77 = BM. 55637, 79 = BM. 55671, 80 = BM. 55710, and the unpublished

For other Amarna festivals see below, p. 174.

There is some uncertainty about 218 in which the separated from hmt-nsw. This text seems to resemble an unpublished meat docket from Professor Griffith's excavations (24/112) which has  $\frac{1}{N}$   $\frac{1}{N}$ 

22/213 = BM. 55712). This seems to be supported by our No. 9, the third line of which appears to have read "from the shyt [of the House of the] Aten in K3-n- $^{\epsilon}nh-R^{\epsilon}$ " (for the preposition hr cf. Gardiner, Eg. Gram., § 165, 1, 2). It is noteworthy that this same building K3-n- $^{\epsilon}nh-R^{\epsilon}$  also contained an ergastulum ( $^{\epsilon}n^{\epsilon}$ ), cf. 203-7, 238, and P., Pls. XXIII. 54, XXIV. 87, and that the  $^{\epsilon}n^{\epsilon}$  and the shyt are never mentioned in the same text. This may perhaps indicate that  $^{\epsilon}n^{\epsilon}$  and shyt are different names of the same sort of room or building.

The ergastulum¹ was a place in which food was prepared, so it is not surprising that the dockets state that preserved meat (233) and fat (264, P., Pl. XXIII. 72) were made in it. In the same way it is in the \*hyt\* that preserved meat (180, cf. 222 and perhaps 249; note that in 9 the restoration \*hyt\* is improbable, see below, under (a) meat lists) and fat (257) are prepared. Moreover, in 316 we have an "\*hyt\* of notched sycomore-figs" (for \*nkwt\* cf. Keimer's papers in Ancient Egypt, XIII. 65 and Acta Orientalia, VI. 288). Černý and Posener have also shown me unpublished dockets from Deir el Medineh which state that fresh fat and unguent (\*mrht\*) were made in the \*hyt\*, and I therefore suggest that "still-room" is the meaning of the latter word.

Having thus discussed the keywords of the dockets we are now in a better position to deal with the dockets themselves.

- (a) Lists of meat. A detailed commentary on the individual items contained in these lists would be far beyond the scope of an excavation memoir, and the following notes lay no claim to completion or finality. Many of the names mentioned in these lists have been dealt with in Sir Alan Gardiner's commentary on the Onomastica. The chief sources for the study of the items of these lists are the old offering lists (for some references see Davies-Gardiner, The Tomb of Amenembet, 75, n. 1; 76, n. 2), the Onomastica which have recently been edited by Sir Alan Gardiner, Pap. Boulaq XI (latest edition by Peet in Mélanges Maspero, I. 185 f.), and some unpublished ostraca in the possession of Sir Alan Gardiner. A list of meat similar to those published in this volume is published in P., Pl. XXV. 101, and two more from Professor Griffith's excavations (24/116 and BM. 57477 whose field number is lost) are still unpublished.
- 9. Year 14, 4th month of the Inundation, [day] - [preserved meat of] - - the Aten, (a) made [in the Great House??] (b) l.p.h. in [Akhetaten?], from the still-room(?) [of the House of the] (c) Aten in K3-n-(nh-R):

```
      meat, breast (k_3bt),^3
      5.
      meat, tongue,
      2.

      meat, ribs of the side,^{(d)}
      5.
      meat, neck^{(e)} (?),
      2.

      meat, wing-rib(s)^{(f)} (??),
      -
      -

      meat, mt_3y^{(g)}
      -
      -

      meat, ch^cw^{(h)}
      -
      -

      meat, vertebrae of the back^{(i)}
      -
      -

      meat, tail^{(j)}
      -
      -

      meat, leg^{(k)} (?)
      -
      -
```

Notes. (a) The restoration of  $iwf\ dr$  after the missing day is reasonably certain, cf. 217. What followed this is more uncertain: the presence of  $p_i$  in the second line speaks against either  $n\ hb\ Itn$  or  $n\ mswt-Itn$ , and I can only suggest the reading  $[n\ ti\ hwt]\ p_i\ Itn$ , "[of the Mansion] of the Aten". (b) There can be

<sup>&</sup>lt;sup>1</sup> See Gardiner, Ancient Egyptian Onomastica, Text, II. 209\* f. (A. 430).

<sup>&</sup>lt;sup>2</sup> Gardiner, op. cit., Oxford, 1947.

<sup>&</sup>lt;sup>3</sup> Gardiner, op. cit., Text, II. 241\* (A. 584).

no doubt of the restoration  $ir[yt \ m]$ ;  $\mathcal{P} \| \|$  render either ihyt or infty impossible, and the lacuna is too small for either that or Pr Itn. The only other possibility seems to be to read [ , cf. the similar use of the word in 4, but the space seems barely sufficient for the normal writing of ir[yt m pr-cs]. The restoration of sht-itn at the (c) Reading  $\P \bullet \mathbb{R} \cdot \mathbb{R} = \mathbb{R} \cdot \mathbb{R}$ (d) The same phrase in 217; BM. 57477 end is not impossible. (e) Reading ∑ ∫ from 24/116; cf. P., Pl. XXV. 101, last line, where the apparently had drww only.1 final signs are quite uncertain: for the word see Wb. III. 229, 362. Another possibility would be to restore from 217. (f) According to Wb. V. 578 dnh is the leg or part of the leg (cf. , Onom. Gol. 7, 11): I have assumed that in the present case dnh is connected with dnh "wing" (Wb. V. 577). Apparently a new word. One is reminded of mt; "phallus", but such a word seems hardly suitable here, but cf. P., Pl. XXV. 101 where the determinative of the missing word on the last line is -. (j) Sd also occurs in 203. (i) Reading tst psd, cf. Pap. Edwin Smith 17, 15. unpublished docket from the 1922 excavations (BM. 55673). Onom. Gol. 7, 11 also includes the tail among (k) Restore perhaps  $\sum_{k} \widehat{k} [\alpha]$  from BM. 57477: possibly a writing of mid: (Wb. II. 45 = the meat. Belegstellen, p. 67).

- 10. A fragment from a similar list of meat including chew, breast, and "jars of (?) meat of the hind quarters, 2: making -". For Černý's suggestion that the doubtful sign is o (see facs. on Pl. XCVIII) cf. 12.
- 12. A fragment of a list of various products. The meaning of hdr and srr is unknown. The list apparently enumerates jars of various sorts of meat, including meat of the belly, then some liquids, and finally drdrw and green hsb-cloth. For drdrw of perhaps drd (Wb. V. 603) and drdr (Wb. V. 604). Hsb is apparently a new word, but of Ptolemaic hb (Wb. III. 250).
  - 13. From another fragmentary list of meat: breast (?)(a), liver,(b) spleen,(c) kidneys (?)(d)
- Notes. (a) Reading šnc, Wb. IV. 506. (b) mist: also occurs P., Pl. XXV. 101, and 24/116; for discussion of the word see Gardiner, op. cit., Text, II. 245\* ff. (A. 598). (c) noting: also occurs P., Pl. XXV. 101; cf. Wb. II. 276 = Belegstellen, p. 407.4 (d) ggt: Wb. V. 208; Gardiner, Hier. Pap. B.M., Third Series, Text, p. 64 = Pap. Ch. Beatty VII, vs. 4, 5; Ostr. Gardiner 156, 18 = Gardiner, Ancient Egyptian Onomastica, Text, II. 240\*.
- 183. Another fragmentary list of meat: good preserved meat; srt-geese, 2; the provisions of - -. Srt-geese are also mentioned on two unpublished dockets from Professor Griffith's excavations (24/114 and one whose number is lost). 184 possibly is not from a meat list, but has been included among the lists because of ps cnhw.
- 217. Preserved meat of the donated lands (?)<sup>(a)</sup> brought from the House of the Aten l.p.h.: haunches,<sup>(b)</sup> 2; swsit,<sup>(c)</sup> 2; hsn,<sup>(c)</sup> 2; ribs of the side,<sup>(d)</sup> 6; shn<sup>(e)</sup> of the side, 1; ----, 1; irw,<sup>(c)</sup> 3; breast, 1; ----.
- Notes. (a) Gardiner suggests that  $2^{\circ}$  is, as in Pap. Wilbour, a writing of hnkw "donated lands", 5 to which meat for the priests of the small shrines might be brought from the temple of Aten. (b) For msdt(?): Wb. II. 153 = Belegstellen, p. 224. (c) A new word. (d) So also in 9. (e) Shn (Wb. III. 470): occurs often by itself in the offering lists (e.g. Pyr. 38c, 80d; Petrie, Dendereh, Pl. IV; Pap. Ch. Beatty IX. 10, 7), but only here and in  $Onom.\ Gol.\ 7$ , 12 is it in association with drww: see further Gardiner,  $Ancient\ Egyptian\ Onomastica$ ,  $Text\ II.\ 253*$  f. (A. 604). It is clearly a soft and flabby object.
  - 253. A fragment of a list of meat of which the only entry preserved is "breast of - -".

For drww see Gardiner, op. cit., Text, II. 254\* (A. 605).

<sup>&</sup>lt;sup>3</sup> See further the discussion in *ibid*. II. 241\* f. (A. 585).

<sup>&</sup>lt;sup>4</sup> See further, ibid. 249\* (A. 600), 245\* ff.

<sup>&</sup>lt;sup>2</sup> Ibid. II. 244\* (A. 595).

<sup>&</sup>lt;sup>5</sup> Gardiner, The Wilbour Papyrus, II. 111-13.

At the beginning perhaps restore "[preserved meat of the still-room (?) in the charge of] the father of the god": cf. 196, 197.

(b) Dockets other than lists that mention meat. Most of the chief points of interest in these dockets have already been mentioned in the preceding discussion of the terms mswt-Itn, iwf dr, iwf d-r, and ihyt, and though there are differences in formula these are usually not of sufficient importance to warrant special mention.

The preserved meat is qualified sometimes by the epithets nfr "good" (183, 195, 203, 224, 233), nfr nfr "very good" (228, 248), or mky (209), a word of unknown meaning.

In two cases some inkling is given of the places from which the cattle came: thus in 233 the meat is "of the two oxen of Kush" and in 254 it is "of the South". With these two exceptions no precise indication of the origin of the meat or cattle is given.

The dockets frequently give the name of the official in charge of the meat or the still-room. Frequently it is the high priest of the Aten who is responsible (193, 195, 200, 201, 210, 215, 249, and perhaps 209). Other officials are the *imi-hnt* (185–9, also mentioned in 262 in the fat series), it ntr (196, 197, 253), sš nsw (190a, 251, 252), hri šnr "master of the ergastulum" (242), and the butcher (sfty) who prepared the meat (204, 206, 208, 212).

(c) Other products. gnn "suet (?)" (234-6): cf. Wb. V. 176. It is apparently distinct from cd "fat": a passage in the Myth of Horus (Chassinat, Le Temple d'Edfou, VI. 85, 8-9) describing the dismemberment of Seth says, "give his bones to the cats, his fat (cd) to the worms, his suet (gnn) to the children of the Harpooners that they may know the taste of his flesh" (cf. JEA. XXX. 12, n. (f)).

Dr. L. Keimer in a recent letter remarks that from the earliest times down to the present day the Egyptians seem to have eaten mice and quotes a note to this effect by Borchardt in F. Netolitzky, "Ergänzung zu 'Nahrungs- und Heilmitteln der Urägypter'" in Zeitschrift für Untersuchung der Nahrungs- und Genussmittel, XXVI, fasc. 8 (1913), 425; cf. also three papers by W. R. Dawson—"The Mouse in Egyptian and Later Medicine"; "Studies in Ancient Materia Medica, III. The Mouse"; and "The Mouse in Fable and Folklore".

Dr. Keimer further remarks that the Egyptian word pnw appears to embrace all the

<sup>&</sup>lt;sup>1</sup> I am indebted to Dr. Abdel Mohsen Bakir, who will publish the papyrus, for permission to quote this passage.

<sup>&</sup>lt;sup>2</sup> JEA. X. 83-6. <sup>3</sup> The American Druggist, Feb. 1926. <sup>4</sup> Folk-lore, XXXVI, No. 3 (1925), 227-48.

smaller rodents, and not merely the mouse, in much the same way as Arabic فأر far means mouse, rat, shrew-mouse, &c.

rd "fat" (240, 256-67). The attribution of 240 is uncertain, but I include it here because of the mention of 21 hin (cf. 258, 266). The formulae bear a close resemblance to those of the meat jars: the fat is made in the still-room (257, cf. P., Pl. XXIV. 72, 73); it is for the festival of the Aten (260-2) and of the birthday of the Aten (259, 262). It is said to be of the srt-goose (258, so too on an unpublished docket of Professor Griffith's season; cf. Anast. IV. 15, 10), of a cow (?) (264: reading to iwit, cf. Wb. I. 49) or an ox (265). In almost every case the fat is fresh, but in one case it is ndm "sweet" (267: so too on two dockets from Professor Griffith's excavations; cf. also Pap. Ch. Beatty VI, rt. 5, 11; vs. 2, 1).

## C. MISCELLANEOUS PRODUCTS

Nhh "oil" (268-74). 268 conforms to the type of those published P., Pl. XXIII. 32-42, and the largely unpublished examples in University College (UC. 5-17) and reads Year 2, oil of the House of the Aten of the ship's captain Tuy, purified by the boiler of [unguent] - - - Iny, the guard Ipy. 271 is Fresh oil of Akhetaten for the festival of Akhetaten. 273 has Oil for eating and no other words: cf. Anast. IV. 15, 9 and perhaps P., Pl. XXIV. 65. 274 mentions oil of the master of the bee-keepers.

Bit "honey" (275-87): of the tithe of 'Ankh-Aten (284), of the Mansion of the Aten in Akhetaten (275, 287), of the House of the Aten (278, 281), ---- in the Southern District (286). Two special varieties of honey are mentioned: stf (283-6) and gmgm (280-2). Stf¹ is clearly connected with the word used of the flowing Nile (Wb. IV. 342), of the overflowing or frothing up of beer (Two Brothers, 8, 6; 12, 9) or of waters rising up (i.e. rising in storm) against 'Apep (Pap. Bremner Rhind, 32, 2), or in the expression parallel of the present use of gmgm is quoted in Wb. V. 172: the stem gmgm means "to touch", "to finger", and hence when applied to honey may possibly mean "clinging" or "viscous". Admittedly these are but guesses, but they may serve as convenient terms until such time as their correct meaning can be established.

Sntr "incense" (288–92): three estates are mentioned, the House of the Aten (288), the Mansion of the Aten (289, 290), and the House of the princess Meketaten (292). In 288–91 the incense is "fresh". For other examples of incense from Amarna see COA. II, Pl. LVIII. 34–6; 22/213 = BM. 55651, unpublished.

Bik "olive oil" (293-6): "very good" followed by uncertain epithets (293, 294), "sweet" (295, 296; cf. P., Pl. XXIV. 67; Anast. IV. 15, 2).

Mrht "unguent" (298, 306, cf. 297): see also COA. I, Pl. LXIII. Q; II, Pl. LVIII. 43. For 306, very good unguent of notched sycomore-figs (nkwt), cf. the unguent of various trees quoted Wb. II. 111 = Belegstellen, p. 162.

Srmt: dbḥ (299; cf. P., Pl. XXIV. 69, 70), and of the House of the High Priest of the Aten (300): for discussion of the word see Gardiner, Ancient Egyptian Onomastica, Text, II. 234\* f. (A. 563).

Ķmi "gum" (302): also occurs on an unpublished docket from Professor Griffith's excavations.

¹ Cf. Ko on a jar from Deir el Medineh (Tomb 1150, No. 19); see Nagel, La Céramique du Nouvel Empire à Deir el Médineh, I. 61; according to Nagel the inscription is in XVIIIth Dynasty hieratic.

Wš3 (301): does not seem to be known elsewhere.

Bnr "dates" (303).

Terrt "grapes" (304), cf. COA. II, Pl. LVIII. 37: for the formula see above, p. 166.

 $\check{S}bt$  (305): Wb. IV. 438 suggests "dregs (?)": the word occurs alone, as here, Anast. IV. 15, 11.

Šnty "acacia" (310), for šndt, Wb. IV. 519.

Pwg (?) (313) is not listed in the Wörterbuch and its nature is quite uncertain, unless it is connected with pzgzw, a mineral product, Pap. Ch. Beatty IV, vs. 7, 5; IX, vs. B. 18, 9.

Nkewt "notched sycomore-figs": - - - the still-room of notched sycomore-figs,  $\frac{1}{16}$  hekat (316); unguent of notched sycomore-figs (306): for references to discussion of this word see above, p. 172.

Gibw (318): according to Wb. V. 154 a leaf of some sort.

The other dockets not specifically mentioned are either of uncertain content, included for the sake of completing our record, or contain personal names or titles.

## D. PERSONAL NAMES AND TITLES

The ostraca, dockets, and other inscriptions have produced a large number of personal names. The bearers of some of these names may possibly be identified with persons mentioned in other texts of the Amarna period. There can, for instance, be little doubt that Paneḥṣy (311) is the same person as the Paneḥṣy of Tomb 6 at Amarna. Accordingly the evidence is set out in some detail in the accompanying table.

In the first column is given the name, but it has not been thought necessary to give every variant spelling. In the second column are given the titles, where preserved, and references to the ostraca and dockets on Pls. LXXXIV-XCIX, and to texts published elsewhere in this volume. Finally, the third column gives material for comparison and identification from previously published or still unpublished material. These notes are not intended to be exhaustive and are only given when the identity of the man is reasonably assured or where titles occur that may possibly supplement incomplete material. For instance, Ay (288) is hardly to be identified with the celebrated Ay, and hence cross references to the latter are omitted. On the other hand, there is every reason to suspect that the *it ntr* of 196 and 253 was the *it ntr* Ay whose house (pr) is mentioned on an unpublished docket from Professor Griffith's excavations.

In order to economize space the references are given in an abbreviated form. Dockets published in P., Pls. XXII–XXV are referred to by their serial numbers only, the plate numbers being omitted. G, or 24/ and a number, or 25/ and a number refer to unpublished material from Professor Griffith's excavations. NT indicates that no title is given on the original, and TL that the title has been lost. An asterisk indicates that the text quoted is still unpublished.

Name	Title	Notes  hrì kimw, COA. II, Pl. LVIII. 9; hrì bch, *BM 59916; sš nsw, P. 56; Davies, V, Pls. X, XI XXII		
P.T.I.d.	hrì kəmw, 87; sš nsw, 33–4/346, 388¹			
金川屋鱼川	TL, 288	***		
图印图	hrì bch, 122			
金元の昼り	garden of, 64			

<sup>&</sup>lt;sup>1</sup> On two blocks of stone from R. 42. 9, see below, p. 189.

Name	Title	Notes			
強ら川へ	sš nsw, 128; NT, 7	sš nsw, P. 44			
16112	NT, 307 (mother of Parennufer)	As a man's name, hrì brh, sš, COA. II, Pl. LVIII.  13 = BM. 588881			
金鱼 III a oa	hrì bch (?), 119, cf. 120	Cf. [iw]-m-hs:f, P. 17			
<b>金川</b> 2001	ḥrì ksmw, 136, 150; ssw, 268; TL, 82	ssw, P. 32, 33, 36, 37; *UC. 5-11, 13, 14, 17; hrs mnš, *24/668 = BM. 57470			
10000000000000000000000000000000000000	kimy, 113; TL, 138				
<b><u>A</u> A</b> <del>Z</del>	hri bityw, 276				
<b>经</b> 二二.4	hri kemw or kemy, 91	•			
<u>&amp; : -   &amp;</u>	NT, 315	**			
1 m	hri ksmw, 88, 322 (?); NT, 6	**			
金月1金月	hrl brh, 39, 156 (?)				
金0000000000000000000000000000000000000	NT, 268 (oil series)	NT, P. 36 (oil series)			
\$ 10 m	sš nsw, Pl. CIV				
金川,一位1	kəmy, 23; hrl kəmw, 103	••			
10.11	ksmy, 104				
10000000000000000000000000000000000000	NT, 5, cf. 321 (?); sdm, 6				
17500	garden of, 71	**			
1_01_2	hri kimw, 53				
⊙\ <b>⊕</b> e <sup>1</sup> ⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄⁄	NT, 5	Cf. wdpw nsw Nhw-m-pr-'Itn (UC. 077, Pl. CVIII) with p. 233 below			
<b></b>	wrw, 15	• • •			
<b>温</b> へご路	hri ksmw, 90				
₹[₹]	sft, 204, 206, 207	••			
METTIPE IN A SA	hri kəmw, 67	• •:			
	mr rwyt, mr sḥ n 'Itn [m] Pr ḥcy n pr 'Itn, Pl. CIII. 49 = Pl. LXII. 4	***			
AK O A COM AX	hri ksmw, 117				
太罗 <b>测</b> []念界。	TL, 200	sš, COA. II, Pl. LVII. 3; hrì kimw, COA. II, Pl. LVIII. 30; NT, COA. I, Pl. LXIV. 35 (?).			
As_Compax	NT, 5; TL, 84	hri ksmw, *24/629 = BM. 57464+57466; hri brh, *26-7/786 = BM. 58878; NT, COA. I. Pl. LXIV. 40 (?)			
二十五十二	NT, 319				
太罗川景	bsk n 'Itn, 311	bik tpl n'Itn, Davies, II, Pls. II-XXVII passim; cf. Pl. LX. 4 and p. 189			
REAR OF AX	ḥri kəmw, 79	••			

¹ Corrected by Černý. ³ Restore ⊙ ਨੂੰ in the lacuna? Paatenemheb or Parēcemheb.

<sup>&</sup>lt;sup>2</sup> Atenemnekhu? or Rēcemnekhu?

Name	Title	Notes			
RETORAL REPORTS	NT, 307	sš, *UC. 24; hri ksmw, *22/213 = BM. 55629 TL, COA. I, Pl. LXIV. 33 = BM. 55708 hri brh (?), COA. I, Pl. LXIV. 18 = BM. 55646 ksmy, *22/213 = BM. 55674; COA. I, Pl LXIV. 17 = BM. 55636; hri ksmw, P. 21 (now in UC.), on line omitted by P.			
及更三级	hri ksmyw, 85; in charge of kitchen, 111, 114; cf. 112				
K V Z W	hri kımw, 236	••			
金月紅月:	NT, 1	kıdıy, COA. II, Pl. LVII. 2			
	miniw, 15				
五人	hri šnc, 242; perhaps also 258, ps sgnn. sš, Pl. XCIX. 2	sft, P. 55			
金贝鱼	sš, 2; TL, 80	NT, P. 37, 38; hri kimw, *UC. 4			
強工点	sš, 2; hrì bch, 143				
全。这么	hrl ksmw, 60				
金金印云	hrl bch, 163; hrl ksmw, 33; TL, 184, 254	ḥrì pāt, P. 36			
A ~ A	hri bch, 74	***			
<b>公</b> 學 <b></b>	hri ksmw, 69	**			
N字∭	sš, 169	hrł ksmw, P. 26 = UC. 2			
- F	ḥri kəmw, 43	**			
1	NT, 292	NT, COA. II, Pl. LVII. 3			
Ala)	hrl bch, 99; ssw, 49; cf. 173				
位101章	imi hnt, 188				
<b>全二</b> 9	hri ksmw, 81	hri kəmyw, *30–1/55 = BM. 63525			
全 经 经 2	hrì bch, 17				
五人	NT, 6	••			
<u> </u>	hri kimw, 66				
_ rå\	hrì bch (?), 52				
金Ⅱ產。	NT, 5	NT, P. 32, 33; *UC. 6-10, 15-17 (all oil series)			
"[金金四]三。	sš nsw, 325	$hri\ mnš,\ P.\ 40 = UC.\ 11$			
<b>€</b>	sš, 1; cf. 278, 286; TL, 144; NT, 31; trl sryt, Pl. LX. 7 and Fig. 25, p. 188	sš nsw, COA. II, Pl. LVII. 3; hri bch, COA. II, Pl. LVIII. 12. 16; *G; mr mšc n nb trwy, MDOG. 55. 16-18.			
2 m	hri kımw, 55, 57; hri kımyw, 56	ḥrì kəmw, BM. 59890+59897			
MIP & ALO	ḥrì ksmw, 151	;***			
Bill at	NT, 5	•••			
金川屋川島	hri ksmw, 146; hri ksmyw, 45; ssw, 269; NT, 172 (meat?), NT, Pl. XCIX. 10 (?)	hri kımw, P. 29; COA. I, Pl. LXIV. 38; COA. II, Pl. LVIII. 8; hri brh, *G; NT, P. 57 (meat series)			

<sup>&</sup>lt;sup>1</sup> Hardly to be identified with the High Priest of the Aten, Meryrec.

Name	Title	Notes  hri ksmw, P. 25; mr st, COA. II, Pl. LVIII. 32  = BM. 63518; NT, *UC. 38 (wine series)			
三八多	hri kımw, 63; hri bch, 164; sft, 212				
图112 四图11二	sš nsw, 48, 123				
金八金	rwdw, 65, 70	rwdw, P. 27			
BREAG	$s\underline{d}m, 4$	***			
ASSA_AIII	sdm, 185; cf. perhaps, NT, 307				
Resal!	hri kimw, 153	**			
<u> </u>	ksmy, 24	·			
经在1万亩	hri bch, 35				
经二計	hri ksmw, 68, 72, 89, 95, 96, 155, 178	ḥrì kmw, *BM. 59924			
	NT, 229, 230, 235				
<b>强</b> 不多。	hri kəmw, 152				
Mann Mann Mann Mann Mann Mann Mann Mann	NT, 5	,,			
知何川東行	TL, 142				
FA162	TL (?), 82	**			
<b>Mark</b> □	hri bch, 304				
14 A P 2 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	hri kimw, 149	**			
三[海]	ḥrì kəmw, 106	hri mnš, P. 41; less certain, sdm, P. 35			
N_c\[\vartex]	hrì bch, 145	**			
2012	hri mnš, 268; NT, 77				
£9090	imi hnt, 189	TL, COA. I, Pl. LXIV. 39; imi hnt (??); COA II, Pl. LVIII. 51			
<b>企作</b> 9000	imi hnt, 185, 186, 187 (?)	imi hnt, 24/116.			
lack or lack	TL, 255	**			
经二十二	NT, Pl. XCIX. 1, 4, and 7 (?)				
型(""	hri bch, 78				

## The following titles occur in the inscriptions published in this volume:

imi lint: 185-9, 262. it ntr: 196, 253. idnw: 317. c; n [bch]: 160.

wr m; w n p; Itn: 193, 195, 200, 201, 209, 210, 215, 231, 249.

bsk n Itn: 311.

bik tpi n Itn: Pl. LX. 4. ps sgnn: 258, 268, 270.

m(i)niw: 15.

mr rwyt: 7; Pl. CIII. 49 (= Pl. LXII. 4).

mr sh n Itn [m] Pr-hey n ps Itn: Pl. CIII. 49 (= Pl. LXII. 4).

rwdw: 65, 70.

hri bityw: 274, 276, 281.

 $hri\ brh: 17, 35, 38, 39, 40, 50, 52, 58, 74, 75, 78, 99, 109, 119,$ 

122, 143, 145, 161-4, 167, 304.

hri mnš: 268, 289.

hri šnr: 242.

hri kimyw: 22, 45, 56, 62, 66, 85.

<sup>&</sup>lt;sup>1</sup> Corrected by Černý; not mr n iwf as given in COA. II, Pl. LVIII. 32.

<sup>&</sup>lt;sup>2</sup> See note on the transcription: if  $H^c m$  wist be read, cf. \*22/213 = BM. 55626 (kimy); COA. II, Pl. LVIII. 36 (ps sgnn).

hri ksmw: 33, 37, 43, 44, 53, 55, 57, 60, 63, 67-70, 72, 76, 79, 81, 87-90, 92-8, 103, 105, 106, 116, 117, 136, 146, 149-54, 178, 237.

siw: 49, 268, 269. siwty: 288, 289.

sš: 1, 2, 169, 277, 278, 286; Pl. XCIX. 2.

sš nsw: 7, 48, 123, 128, 190a, 251, 325; Pl. CIV; 33-4/346, 388 (both from R. 42. 9: see below, p. 189).

śft: 204, 206, 207, 208, 212.

śdm: 4, 6, 185.

kimy: 23-5, 91, 104, 113.

tri sryt n ps ss Shtp-Itn: Pl. LX. 7; Fig. 25 and p. 188.

### E. GYPSUM SPECIMENS

In addition to the normal types of ostraca and dockets on potsherds, the excavations produced a number of small cones of gypsum the flat surfaces of which were inscribed with brief hieratic dockets. Two similar specimens were described and published some years ago by Spiegelberg.<sup>1</sup>

The cones were quite irregular and varied between 4.5–5 cm. in height and from 6.5–7.5 cm. in diameter. The surfaces are quite unsuited to writing and the texts have suffered severely and are most difficult to decipher. With the exception of 333, the writing of all specimens is in black ink.

The purpose of the cones is by no means certain, but it may be presumed, perhaps, that they are samples of gypsum needed for building purposes in Akhetaten and submitted for inspection to ensure that they reached a required standard (for analyses of selected examples see below, pp. 243–5). The hieratic texts may have indicated either from what batch they came or that they had passed the test. Apart from the inscribed examples, numerous uninscribed cones were also found.

The texts which these cones bear are simplicity itself and with the exception of 334 and 335 differ only in the dates and the quite unimportant grouping of the signs and words. The normal text was: Month X of season Y day Z: gypsum of Akhetaten. This uniformity of formula has rendered it unnecessary to reproduce the text of each individual cone, and all that need be done is to add the details of the dates that have been preserved:

Prt. 1st month: day 4 (?) (33-4/92); day 13 (33-4/89; 32-3/61); day 14 (33-4/236); day 16 (33-4/237). 2nd month: day 1 (31-2/81); day 2 (332=31-2/84; 31-2/82, 85); day 5 (31-2/79); day 10 (31-2/86; 33-4/238); day 13 (33-4/162); day 14 (33-4/91); 15 (331=33-4/241); day 22 (33-4/239). 3rd month: day 11 (31-2/78); day 12 (33-4/231); day 19 (33-4/257); day 20 (31-2/80); day 21 (32-3/250); day 20 +x (31-2/77). 4th month: day 10 (33-4/93).

**3.ht.** 1st month: day 6 (335 = 33-4/135). 2nd month: day 16 (33-4/95); day 28 (333 = 33-4/242); day 20 +x (33-4/90). Either the third or the fourth month: day 23 (35-6/227). **Šmw.** 3rd month: last day (334 = 31-2/87).

The cones just mentioned were found in the following parts of the city:

- 1. P. 42. 1 (the King's House, see pp. 87 ff.): 31-2/77-82, 84-7, and one with illegible date.
- 2. P. 41. 3 (Magazines between the Temple and Royal Estate, Western Block, see p. 106): 32–3/61.

<sup>&</sup>quot;Gipsproben aus Tell el Amarna mit hieratischen Aufschriften", in ZÄS. LVIII. 51-2, with a sketch of typical specimen on p. 51. The dates recorded on these two specimens are: Prt, month 2, day 11; Prt, month 3, day 22.

- Q. 41. 10 (Magazines between the Temple and Royal Estate, Eastern Block, see p. 108): 32–3/250.
- 3. Great Palace, Central Halls (see pp. 57 f.): 35-6/227.
- 4. Q. 42. 7 (the Foreign Office, see pp. 113, 114): 33-4/135.
- 5. (a) Government Offices: East Block, Southern Group (p. 116):
  - Q. 42. 12: 33-4/90.
  - Q. 42. 14: 33-4/91-3, 95, and one with illegible date.
  - Q. 42. 15: 33-4/89.
  - (b) Government Offices: East Block, Northern Group (p. 116): R. 42. 15: 33-4/162.
  - (c) Government Offices: Scattered Houses, Houses to the East (p. 117): Q. 42. 25: 33-4/257.
  - (d) Government Offices: Scattered Houses, Houses to the South-East (p. 117): Q. 42. 23: 33-4/227, 231, 236-9, 241, 242, and 10 with illegible dates and many others uninscribed, all from pits in the court.

It will be seen that, with the exception of the isolated examples, the majority of the cones were found in three groups, 11 from P. 42. 1, 7 from the Eastern Block of Government Offices, and considerably more than 20 from that section of the Government Offices which, for want of a better term, we have called "Scattered Houses".

The presence of such specimens in the King's House may perhaps be explained by the assumption that an official responsible for the maintenance of the building had an office there to which would be brought from time to time specimens of materials that might be required.

While in the Government Offices it is possible that all specimens have been scattered from a single source of supply, which can hardly have been any other than Q. 42. 23, it seems more probable that there were two sources, one certainly being Q. 42. 23, and the other possibly Q. 42. 14. It is apposite to recall at this point that bricks marked [] were found in the Eastern Block (Q. 42. 29; see above, pp. 116, 150), and that others stamped Pr hey n ps Itn were found in the "Scattered Houses" (Q. 42. 25 and R. 42. 6; see pp. 117, 150). It is obvious that such humble buildings could hardly have borne such pretentious names, and, unless the occurrence of the bricks is a mere accident, it must be assumed that in these buildings certain activities connected with the Royal Estate and the Great Palace<sup>1</sup> were conducted. If we are correct in assuming that the gypsum cones were builders' samples, it is possible that these activities were connected with the building and maintenance of official buildings, in other words this group of offices may have been a kind of Office of Works. It follows, therefore, that the Eastern Block may have been that branch of the Office of Works specially concerned with the affairs of the Royal Estate, and that the group composed of the "Houses to the East" and the "Houses to the South-East" was concerned with the Great Palace. Other parts of this group of offices may have been devoted to the interests of other parts of the Central City. This is naturally only a tentative suggestion, based on little evidence, but at least it explains the occurrence of the stamped bricks and the distribution of the cones, both of which must otherwise remain without explanation.

<sup>&</sup>lt;sup>1</sup> It will be seen below (pp. 195, 196) that the "House of Rejoicing" is the name of the Great Palace and of part of the Great Temple. Here it seems likely that the term refers to the Great Palace.

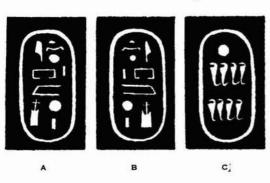
#### 4. HIERATIC GRAFFITI

In the Palace were discovered a number of blocks bearing hieratic graffiti. These were presumably inscriptions which had been placed on the blocks when they were in the quarries. The texts were very difficult to read, they had been written with a thick brush on the undressed stone, and the damp cement in which they had been laid had caused the ink to run and the signs to become blurred and smudged. A selection of facsimiles of these graffiti is reproduced on Pl. XCIX, but no attempt has been made to transcribe them, for they are so fragmentary and uncertain. Some were written in red ink (1, 4, 6, 7, 8, 10–12, 14) and others in black (2, 3, 5, 9, 13).

The exact content of any single text is uncertain, but it would seem that each text recorded at least the name of the building for which the stone was intended, and the name of an official. Thus 7, second line, may have been for the House of Akhenaten, and there is possibly a reference to the Aten in 13. As to personal names, a certain Tjanufer (*Ti-nfr*) is found on 1, 4, and perhaps 7; a scribe Ptaḥmose on 2, and perhaps Ḥatiay (?) on 10.

#### SMALL CLAY SEALINGS

On Pl. C are reproduced facsimiles of the impressions of scarabs and seals on small lumps mud. Most of these lumps either had string through them or showed the holes or places in



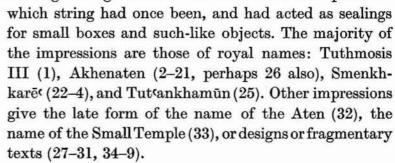




Fig. 23. Impressions of stamps on jar handles (Scale 1:1).

#### IMPRESSIONS ON JAR HANDLES

A few jar handles were found on which a short hieroglyphic inscription had been stamped before firing. The different forms of text are given in Fig. 23. Of these the most common by a long way is A, "The House of Aten in Heliopolis", which is similar to COA. II, Pl. LVII. AA. Occasionally the same inscription is found, but in the opposite direction (B). Only one example each of the other impressions was found: C, eight snakes below a disk; D, Nefertiti; E, Tyi.

# HIEROGLYPHIC INSCRIPTIONS (Pls. CI-CIII)

The copies of various inscribed fragments of stone which are reproduced on Pls. CI-CIII record all the more important or significant fragments that were found. Relatively speaking, the Great Temple and certain sections of the Great Palace produced less inscriptional material than the Small Temple or parts of the Palace such as Weben-Aten. This lack of material from

the former sections of the site is possibly to be explained in part by the fact that they had already been examined by Petrie, and in part, perhaps, because they had received special attention when the site was destroyed. Whatever the reason may have been, throughout this part of the city the inscribed stonework was of an exceedingly fragmentary nature, not a single complete piece was found, and the surviving fragments mainly recorded parts of the names and titularies of Akhenaten, Nefertiti, and the Aten, or parts of the names of buildings. No useful purpose would have been served by the publication of all this mass of material, and hence the published fragments have been selected with two aims: to collect such fragments as enable us to recover and perhaps to locate the names of various sections of or buildings in this area (1-12, 15-18, 21, 26-8, 31-5, 40-2, 44-9); and to present material bearing on the names of the Aten or reworking of the earlier form of the name (4, 13, 14, 18-20, 22-6, 28-9, 36, 39). The discussion of the fragments containing topographical details will be found in Appendix A, but the names of the Aten can be discussed more profitably here.

The meaning, forms, and modifications of the name of the Aten have been discussed by Gunn and Sethe in works already quoted above, p. 153, nn. 1 and 2. The early form of the name of the Aten was () (Rēc-Ḥarakhte lives, who rejoices on the horizon in his name: 'Shu who is Aten'". About Akhenaten's 9th year this was changed to () (Rēc the Father, who has returned as Aten'".

Occasionally we find that the first cartouches have been altered to the later form. Such alterations have already been discussed by Gunn (COA. I. 149) and further examples will be found in our Nos. 4, 13, 14, 18–20, 22–6, 28–9, 36, 39. In the drawings the surcharge is given in solid black, the early form of the name and the texts contemporary with it are shaded , and damaged portions are indicated by . In all texts where there is no question of reworking all signs are given in solid black, and damaged portions, in accordance with the normal practice, are shaded . In all these examples of reworking no signs were observed of words having been chiselled out: in every case the signs had been covered by a thin coat of plaster and on this the new signs had been cut. In most cases this plaster has now fallen away (where it is still preserved it is indicated in the copies by dotted lines), and very frequently the later signs cut into the earlier ones.

Our excavations have produced the first three examples of texts in which the surcharge is in this intermediate form as  $\lfloor \bigcirc \bigcirc \cap (18-20)$ . It may be assumed therefore that these fragments are slightly earlier than those which bear the more usual surcharge of  $\bigcap \bigcirc \cap \bigcirc \cap \bigcirc$ . It is also to be noted that these three fragments were found in the north-western extension of Weben-Aten, which may therefore be slightly earlier than the rest of that building.

It has already been pointed out (p. 153) that the change in the name of the Aten provides an approximate means of dating inscriptions. In texts in which the name has been destroyed the titles of the Aten are of some slight assistance in dating, for the phrase  $imi \ hb(w)$ -sd is usually, but not invariably (cf. JEA. IX. 170), an indication of the early Aten name, while  $nb \ hb(w)$ -sd is regularly associated with the later form of the name.

It does not seem to have been noticed hitherto that the titles of the Aten seem to contain another indication of date. In its fullest form the titulary that accompanies the early form of the name is Itn only wr imi hb(w)-sd, nb snn(t) nb Itn, nb pt, nb ts followed by the name of a building. In the course of the excavations several hundreds of inscribed fragments have been discovered and studied, but it is a remarkable fact that nb šnn(t) nb Itn is very rarely found in connexion with imi hb(w)-sd, and we have only noted three instances in which it occurs (an unpublished fragment from the Small Temple, the statue bases from the Small Temple which are discussed below, and a fragment from Weben-Aten, Pl. CIII. 40). On the other hand, nb  $\delta nn(t)$  nb Itn always accompanies the later form of the name and nb hb(w)-sd. A search through publications of Amarna inscriptions also reveals that it is only in the Amarna tombs that nb  $\delta nn(t)$  nb Itn is found regularly with the early form of the name; in all other cases it is usually omitted.<sup>2</sup> On the Boundary Stelae this phrase never occurs, a fact which is significant, for it enables us to establish the certain fact that it was not employed at the beginning of the 8th year. Since this phrase always occurs with the later name it is reasonable to assume that it is a later addition to the titulary, and the evidence of the Boundary Stelae and the fact that it is of so infrequent occurrence in the Central City indicate that it was only adopted towards the end of the period during which the early name was in use. It therefore appears that texts which bear the early name or imi hb sd are to be dated to the first nine years of the reign (see above, p. 153). If such texts also contain  $nb \, \delta nn(t) \, nb \, Itn$  they are probably to be dated to the latter part of the 8th year and to the 9th, but if that phrase is omitted they are to be dated up to the first few months of the 8th year. Texts which contain the later form of the name or  $nb \ hb(w)$ -sd are likely to be subsequent to the 9th year.

It is clear that the occurrence of different forms of the name of the Aten may help to establish the date and order of building of the several parts of the site, and accordingly the accompanying table gives an analysis of the occurrence of these names.

The conclusions which may be drawn from the study of this table are discussed further in Appendix A, but a few chief points may be indicated. It is clear that the Small Temple is earlier than the Great Temple and the Great Palace, and it is probable that it was completed by the 8th year. As regards the Great Palace it should first be pointed out that the later form of the name never occurs on fragments of reliefs, and is only found on the lightly cut columns in the Broad Hall, which apparently come from the pavilion of the Window of Appearance (Pl. XIII B, Y), on the sandstone balustrades, and on small objects such as fragments of statues, stelae, and faience articles. It therefore appears that, with the exception of the Coronation Hall, the building of the Palace was largely the work of the first nine years, that much of the decoration was completed by the 8th year, but that certain parts of the Broad Hall and all the

<sup>&</sup>lt;sup>1</sup> In the tomb of Ay, Davies, VI, Pl. XXXII.

<sup>&</sup>lt;sup>2</sup> It is only found associated with the early form of the name in Berlin 14145 (Aeg. Inschr. Kgl. Mus. Berlin, II. 255-6); BM. 1000 (= Edwards, Hieroglyphic Texts, VIII, pp. 27, 28; Pl. XXIV); Borchardt, Porträts der Königin Nofretete, Pl. I; Chronique d'Égypte, 12. 238, 239; ZÄS. XIX. 116.

sandstone balustrades (but not the alabaster or limestone balustrades) were set up or decorated after the 9th year.

A note of caution should be sounded with reference to the figures from the Great Temple, for the building had been partially excavated by Petrie and there is now no means of knowing the details of the Aten names produced by his excavations. It would appear, however, that the destruction of the temple was very thorough and the excavation of Gem-Aten and Per-ḥai produced very few inscribed pieces. The evidence is so scanty that any conclusions based on it must be treated with every reserve, but the available evidence indicates perhaps that the decoration of the Great Temple started in the Sanctuary at the east end before the 9th year and that the sculptors gradually worked westwards towards the entrance, which may, therefore, have been the last part to be decorated (see also p. 3).

Analysis of the Occurrence of the Names of the Aten<sup>1</sup>

				Early name		Reworking		Late name		Other criteria	
				I	II	I	II	I	II	imi hb-sd	nb hb(w)-sa
Small Temple <sup>2</sup>		•		25	28					2	•••
Great Temple:											
Sanctuary .				12	8			2	1	2	1
Gem-Aten .				2				5	5		1
Per-ḥai .		•		2				3	2		1
Great Palace:					1						
North Harem			.		10	Only Early	Aten nam	e			
South Harem		5.0	.	7	10	١		١			
Weben-Aten				26	28	9	4			5	
Broad Hall .				58	48	1	2	3	4	10	1
Courts south of	Broad	d Hall		3	3				**	1	
Central Halls <sup>3</sup>		7.00		18	18	2	3	1	2	44	
Sculptors' Area				3	4			2	2	1	3 K K
Rest of Palace				4	4				1	1	

<sup>&</sup>lt;sup>1</sup> I and II denote the first and second cartouches respectively of each form of the name.  $Imi \ hb$ -sd and  $nb \ hb(w)$ -sd are only included when not accompanied by the name of the Aten: all instances of imi-hb-sd on reworked blocks have been ignored: no instance of  $\frac{1}{2}$  being changed to  $\longrightarrow$  has been observed.

In addition to the inscribed fragments reproduced on Pls. CI–CIII the excavation of the Broad Hall produced a number of small inscribed pieces of alabaster and fine, hard limestone. Almost all of these came from the southern end of the Broad Hall, though a few were found in other parts of the Palace. There can be no doubt that all these fragments came from a uniform series of objects which were probably erected somewhere near the southern end of the Broad Hall.

The fragments included parts of the figures of the King, Queen, princesses, the rays of the Aten, and offerings. The figures are all in low relief and the surface of the individual fragments is flat. It is clear that these were not parts of statues and they seem to be from stela-like objects

<sup>&</sup>lt;sup>2</sup> The figures exclude all occurrences of the early name on the fragments of statue bases dealt with below.

<sup>3</sup> Excluding the data from 1936/7 when less detailed records were kept. In that season the work in the Central Halls produced 15 objects or fragments with the early name, 3 with the late form, and one with reworking.

<sup>4</sup> Including one instance of the somewhat rare imi hbw-sd.

or plaques. There are certain indications that one at least of these objects was considerably larger than the others.

It appears that the objects were flat-topped; there is no sign of a cornice, but possibly there was a roll of some sort. While no complete piece was found, it is possible to reconstruct the general appearance. In the centre immediately below the roll was the Aten Disk with its rays ending in hands. The scene included the figures of the King and Queen standing before offerings, and one or more princesses (only the name of Meritaten has been preserved). On each side of the disk short vertical columns give the titulary of the Aten, the name of the Palace, and probably the names of the King and Queen. Longer vertical inscriptions at the sides recorded the names of princesses. The most reasonable explanation of these objects would be to regard them as plaques which were inserted in wall surfaces.

A remarkable feature of these plaques is that they do not seem to have been made of single pieces of stone. It seems as though the disk and sometimes the accompanying titulary were made of a single piece, but a considerable number of the fragments were not broken and had been carefully dressed on all surfaces: e.g. a fragment measuring  $7 \times 4.8 \times 2.9$  cm. was dressed on all sides but bore only the words nb ts hrl-ib Pr-hcy n ps (this fragment was also remarkable for the fact that the two long sides were slightly concave, a condition which was noted in several other examples). In other cases the line of the dressing cuts across the figure of a princess or the Queen. Though no signs of plaster or cement were to be observed, it is probable that these fragments were inlaid in the complete plaque. Usually these small pieces were of the fine, hard limestone and contained the inscriptional portions, as though the texts were inserted after the main drawing was completed.

Other inscribed objects which are not included in Pls. CI-CIII came from the Small Temple. They were small fragments of statue bases of the same type, in most cases, and probably much the same size as BM. 1000, or the examples published by Griffith in JEA. XVII, Pl. XXVII, Figs. 1, 4, and 5.

It was impossible to reconstruct a complete base, and hence it has been impossible to decide the original size or establish the exact relationship of the various texts. Only one complete side, a short one, was obtained, and this measured 53.5 cm. The only other considerable but incomplete fragment of a side, made of at least ten fragments, was 72 cm. in length and 36 cm. in depth, both measurements being incomplete. It is probable that the fragments belonged to at least ten different bases, and all may originally have come from the sanctuary of the Small Temple.

The material in every case was sandstone, but three qualities were noted: (a) hard, close-grained, pink in colour; (b) hard, fine, close-grained, light yellow in colour; (c) coarse grain, very friable, poor quality, dull purple in colour. Types (a) and (b) were by far the better quality of stone, and the inscriptions on them always seem to have been in two lines. Type (c) was far more common, but never had more than one line of inscription, and with one exception the signs and the depth of the lines were smaller than in (a) and (b).

It has already been explained that no complete base was found, so the exact relationship of the different parts of the texts is not quite certain. Accordingly, we divide the texts into groups. In these groups, except for two signs in the titulary of Nefertiti, every sign can be vouched for (Fig. 24).

Formula A was found on stones of all three qualities, and was also written from right to left. In types (a) and (b) it formed the top line, and seems to have been written twice, once in each direction. In type (c) it is possible but by no means certain that it was written twice. In types

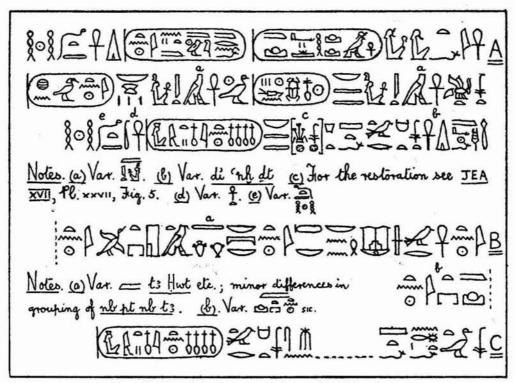


Fig. 24. Inscriptions on statue bases from Hat-Aten.

(a) and (b) formula B begins the second line. In type (c) it must have followed formula A. Formula C would seem to occur only in types (a) and (b), but its absence from type (c) is not absolutely certain. The connexion between formulae B and C is never obtainable in types (a) and (b), but it is always found in the second line. The only princesses whose names were preserved were  $\emptyset = \square \square$  and  $\emptyset = \square \square \square$ . It may be noted that on the originals  $\odot$  was generally but not invariably written  $\emptyset$ . The later forms of the name and titulary of the Aten were never found, but the presence of  $nb \ \delta nn(t) \ nb \ Itn$  may indicate that these bases were inscribed after the first half of the 8th year of Akhenaten. This remark applies also to all the inscriptional material from the Small Temple in which no instance of the late name was found among the 237 registered fragments of texts, and only one example, other than the bases, of  $nb \ \delta nn(t)$   $nb \ Itn$ . None of the fragments from the Small Temple were reworked.

The other fragments published in Pls. CI-CIII contain little of real interest. 5, a fragment of a stela, may perhaps be part of a hymn to the Aten. On 30 only the words "appearing in festival in" are preserved. 37 and 43 give the name of the princess 'Ankhesenpaaten: in the former the figure of the princess has been cut over an earlier relief. The princess Meketaten is mentioned in 38. 49 (see also Pl. LXII. 4) is a copy of a band of hieroglyphs, originally filled with blue paint, on an alabaster weight: the text reads "imy-r rwyt, overseer of the Chapel of the Aten in the House of Rejoicing of the Aten, User".

Finally, mention must be made of the wooden coffinette (Pl. CIV; see also p. 90 and Pl. LXXIV. 9) which was found in P. 42. 2. The hieroglyphs were in yellow paint which was much faded and most of which had disappeared, and most of the signs were exceedingly faint and difficult to read. It is doubtful whether the lid was ever inscribed: no traces of signs were visible, though the bands in which they should have been written were faintly indicated. The texts are too fragmentary and uncertain to be translated. The owner was the royal scribe Iny; note the strange writing \(\frac{1}{N}\) for nsw. The scenes show the mourning before the mummy, the opening of the mouth, and other scenes of offering. The coffinette is of great interest as being the third example known of the depiction at Amarna of any part of the usual funerary ceremonies. At Amarna the funeral rites and procession are only given in the tomb of Huya (Davies, III, Pls. XXII, XXIII), and even there the scenes are much abbreviated. In the Royal Tomb the King and Queen are shown mourning over the body of Meketaten (Bouriant, Culte d'Atonou, Pl. VI), but such scenes as are shown on the coffinette, especially the opening of the mouth, are without parallel at Amarna. The reference to the "living Aten" on the right side of the coffinette is a clear indication that it was a product of the Amarna period.

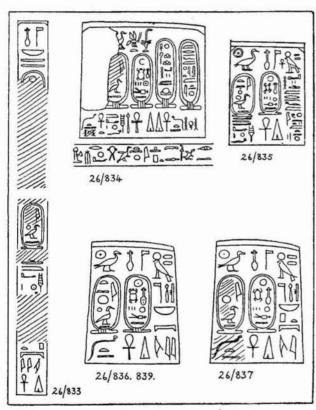


Fig. 25. Inscriptions on bronze vessels from the Sanctuary of the Great Temple.

# MISCELLANEA

Finally, it is convenient to make reference here to other inscriptions which, though not included in Pls. CI-CIII, have for the most part been mentioned and illustrated in other parts of this memoir.

1. During the excavation of the Sanctuary of the Great Temple a bronze incense burner (26/833) and five situlae (26/834–9, 838 being uninscribed) were found (see above, pp. 10, 12 and Pl. LX. 5–8). Since the photographs on Pl. LX are not very clear, the texts are given in Fig. 25. These copies, it should be noted, are from photographs, for neither the originals nor hand copies of them are accessible at the time of writing.

The photographs of 833 are particularly poor and difficult to read. The dig records treat fragments (a) and (b) as though they came from separate objects, but there seems a possibility that they actually join. If so, there is certainly room for considerably more than  $\mathfrak{L}$  before the

second cartouche: read perhaps [ss R' cnh m msct nb hcw].

834, a product of the latter part of the reign, is interesting because of the dedication by "the standard bearer of the regiment of Sehetep-Aten, Ramose". In view of the suggestion (p. 198 below) that Shtp-Itn is an epithet of the King, it seems possible that here also the term refers to Akhenaten and is not the name of the regiment; cf. "standard bearer of the regiment of Nfr-hprw-R<sup>c</sup>-wc-n-R<sup>c</sup>" (Davies, IV, Pl. XXXIX). A fragment filling the gap on the left of

the situla and bearing the name of Nefertiti has been restored to its original position in Cairo, but since I have no copy of the name it has been omitted from the drawing.

835 is noteworthy for the combination of the early form of the name of the Aten without cartouches (note that the ancient engraver omitted m sht in the first half of the name) with that of Akhenaten, for which I can only quote two other parallels (Sandman, Bibliotheca Aegyptiaca, VIII. 149, 4-6; 157, 12-14).

836, 837, and 839 show no special peculiarities. In 836 and 839 there are no traces of  $p_{\perp}$  in  $p_{\perp}$ , but there is possibly just room for the insertion of the signs.

- 2. Scarabs of the lion hunt of Amenophis III (Pl. LXXVII. 5, 6) are relatively common (for bibliography see Newberry, *Scarabs*, 171; Drioton-Vandier, *L'Egypte*, 360). Apart from minor differences in grouping, our example has no special points of additional interest; note, however, the deliberate erasure of Amenophis in the second cartouche.
- 3. The fragment of a door-jamb found in the official residence of Panehsy (Pl. LX. 4) is, from the titles and the circumstances of its finding, certainly of Panehsy himself. The text is too fragmentary to be translated, but appears to be composed of phrases typical of Amarna. Thus, for line 3 compare *ink nmh hr it-i mwt-i* (Davies, V, Pls. IV, XIV), and for line 4 compare Davies, II, Pl. VIII (from the tomb of Panehsy).
- 4. In the course of the excavation of R. 42. 9 were found two pieces of stone each bearing in a vertical column of hieratic. The stones were not in situ and their purpose is uncertain, unless they can be regarded as boundary stones of some sort.

#### APPENDIX A

#### THE TOPOGRAPHY OF THE CENTRAL CITY<sup>1</sup>

Since our excavations have produced the names of many buildings or parts of buildings which were obviously situated in the central section of the city, it seems opportune to attempt to identify them with buildings that have been excavated. The following lines, therefore, deal with all names which are certain, or likely, to be those of parts of the Central City. Many of the identifications are dubious, many more names cannot be identified at all, but it is hoped that discussion and enumeration of these names will not be without value.

The sources for this study are the list of Akhenaten's buildings contained in the Boundary Stelae K and X, the inscriptions of the tombs at Amarna, the hieroglyphic, hieratic, and jarsealing inscriptions from the excavations, and miscellaneous inscriptions published from time to time in various books and periodicals.

The obvious starting-point for our study is given by the Boundary Stelae K and X.<sup>2</sup> The list of buildings is contained in lines 14–17 of K and lines 17–19 of X. The following quotation takes the text of K as its basis, and is controlled by my own collations of both stelae. Where K is damaged restorations have been made from X, with a few additional restorations which seem probable, and which are inserted for the sake of clarity and continuity (Fig. 26).

<sup>&</sup>lt;sup>1</sup> For a preliminary study see *JEA*. XXI. 136-9. The names of certain buildings are marked on Pl. I. Since this plate was prepared many years ago, it does not represent my final conclusions. A simplified but more accurate plan will be found in *The Town Planning Review*, XX (Apr. 1949), Fig. 15.

<sup>&</sup>lt;sup>2</sup> For the text of K see Davies, *The Rock Tombs of el Amarna*, V, Pls. XXIX, XXX, XXXVII, XXXVIII; for X see Davies, *op. cit.* V, Pls. XXXI, XXXII. Hereafter this publication is quoted simply as Davies, followed by the appropriate volume number. A more recent publication of the text of both stelae will be found in Maj Sandman, *Bibliotheca Aegyptiaca*, VIII. 103–18, where the texts are set out in parallel.

The passage reads: (14) . . . . . . I am making the House of the Aten for the Aten my father in Akhetaten in (15) this place. I am making the Mansion of the Aten for the Aten my father in Akhetaten in this place. I am making the "Sunshade" of the [great] royal wife . . . . . . for the Aten my father in Akhetaten in this place. I am making a House of Rejoicing for the Aten my father in the island of "Aten distinguished" in jubilees" in Akhetaten in this place. I have made a

发言发生的"一一一一人的意思"中 TRUBORDON STATE 1-X4411\_51-NeN'B 21 HARTER TO THE THE ROLL OF THE PARTY OF THE P Notes. D= Davies, S= Sandman. Dalways beardless. a. Rest. from X. B-c. Certain; & suits better than S's \$\overline{S}; Somito \$\overline{S}, which is clear; D & S. om. s, undamaged & Apparently so; no loss. f. Clear; D & X &. 4. Som. h. = rest. from X; n p3 1tn just fills lacuna. i. I rest. from l. 15; X has M' for K & ... i. Rest. from X; -> suits tro. better than S's - 1. Erstain; so also S. L. Som. s. m. Rest. from X; 7. S - 2 but I is clear.

Fig. 26.

House of Re- (16) joicing [of the Aten]<sup>5</sup> for the Aten my father in the island of "Aten distinguished" in jubilees" in Akhetaten in this place. I am making all the works which [are required] to be done

<sup>&</sup>lt;sup>1</sup> It is, of course, possible to translate "I will make". It is perhaps preferable to translate this and the following phrases: "It is in Akhetaten, in this place, that I am making (or I will make) X for the Aten my father"; cf. Polotsky, Etudes de syntaxe copte (Cairo, 1944), 77.

<sup>2</sup> ts hwt ps itn is damaged but certain. The front of 🥻 is missing, the lower part of 🖟 is damaged, and the head of 💥 is missing, but above it there is hardly room for -, which is not really needed for this name is usually spelt with the direct genitive. Sandman's reading does not conform with what is still visible on the original.

<sup>&</sup>lt;sup>3</sup> By an unfortunate error my hand-copy wrongly gives X instead of the correct X.

<sup>4</sup> K has clearly, though Davies gives; X has .
5 \_\_\_\_\_ is preserved in X. The restoration n ps itn is sufficient to fill the lacuna. The name is clearly a longer one than that of the first Pr-hry.

<sup>6</sup> Bikw nb nty restored from X: — suits the traces better than Sandman's damaged — as determinative of bikw.

for the Aten my father in Akhetaten in this place. I am making . . . for the Aten my father in Akhetaten in this place. I am making (17) for myself the apartments of Pharaoh, L.P.H. I am making the apartments of the royal wife in Akhetaten in this place.

# A. No and the Aten in Akhetaten."

The identity of this building with the smaller temple at Amarna (see above, pp. 92-7) is assured. This identification is supported by the discovery of many mud bricks stamped with [P. LXXXIII. 1], and by inscriptional evidence. During the course of the excavations 237 fragments of stone were registered, and Hwt Itn was the only place-name recorded. Not a single instance of the later form of the name of the Aten was observed, so it may be assumed with confidence that the temple was erected during the earlier period of Akhenaten's reign. For inscriptions from this site see above, pp. 186, 187.

Apart from these inscriptions, this name is found in the following inscriptions from Amarna: jar sealings: Nos. 28-33; COA. I, Pl. LV. V; on hieratic dockets: Nos. 47-54, 134(?), 173, 275, 287, 289, 290; cf. also 1; COA. I, Pl. LXIII. J, cf. Pl. LXIV. 73; COA. II, Pl. LVIII. 17-23; P., Pl. XXII. 15. In the tombs the name only occurs in that of Pentu, who was one of the temple officials (Davies, IV, Pls. II, III, IV, VI, IX).

Outside Amarna, the name is found at Gurneh in the tomb of Ḥatiay,<sup>2</sup> who was overseer of the granary in it, and in the tomb of Ramose (No. 46, unpublished) who was major domo.<sup>3</sup> A stela in Cairo<sup>4</sup> records the name of a certain Ḥuy, who was ḥrì śwy in the Mansion of the Aten. It need hardly be pointed out that neither of these texts need necessarily refer to a Mansion of the Aten at Amarna. The name in the tomb of Ḥatiay may be that of a part of the temple of Aten at Karnak or that at Luxor. In the case of the stela of Ḥuy, which was found at Sakkara, the reference is very probably to the Ḥwt Itn at Memphis.<sup>5</sup>

The occurrence of stamped bricks shows, moreover, that the term "Mansion of the Aten" did not cover the temple alone but was applied to the private portion of the palace (on the east side of the King's Road) and to the rooms, magazines, and workshops of the priests which lie immediately to the south of Hwt-Itn (P. 43. 1 and 2). This whole area was therefore considered to be a unit. For the bricks in Q. 42. 29 see above, p. 181.

# 

This is the Great Temple lying to the north of the Royal Estate (see above, pp. 5-17). Fragments of both early and later Aten names were found, but the latter predominate west of the Sanctuary (p. 185 above). Several divisions of the *Pr Itn* are known:

1. ❤️ৣ ্লি লা কি লা Akhetaten." This name is similar to that given to the temples of the Aten which were founded in Nubia and

<sup>&</sup>lt;sup>1</sup> There is also a possibility that the palace in the north, opposite U. 25. 11 (the northern Expedition house), also bore this name. This is not the Northern Palace excavated by Newton and Whittemore, but that excavated in 1931–2 (JEA. XVIII. 143, 144).

<sup>2</sup> Ann. Serv. II. 2-4.

<sup>3</sup> I owe this reference to Sir Alan Gardiner; this is not the famous Ramose of Tomb 55.

<sup>&</sup>lt;sup>4</sup> Cairo 34182: published Mariette, Mon. div., Pl. 56; Lacau, Stèles du Nouvel Empire (CCG), 222-4, Pl. LXIX. Cf. also de Rougé, Inscr. Hier., Pl. LIV; Lieblein, Dict. des Noms, No. 622.

<sup>5</sup> See further Mariette, Mon. div., Pl. 34e; Rec. de Trav. VI. 52-3; Spiegelberg, Rechnungen, XVI. 4; Trans. Roy. Soc. Lit. VIII. 308.

<sup>&</sup>lt;sup>6</sup> For another inscribed brick from P. 43. 1 and 2, which may give the name of these buildings as a sub-section of the Mansion of the Aten, see p. 150, and Pl. LXXXIII. vii.

Syria, and to a part of the temple or temples at Thebes. At Thebes the name occurs in the tomb of Ramose (No. 55)3 and on some blocks found in the temple of Luxor.4

Gm p; Itn is further subdivided:

ever' in 'The Aten is found' in the House of the Aten in Akhetaten." The most complete instance of this name is to be found on a limestone balustrade now in Cairo (Cairo Temporary Register 27:3:25:9; see Pl. LVII. 5, 8). Four more fragments of this same name have been found in or near the Sanctuary of the Pr Itn (Pl. CIII. 42, 44, 45, 47). In addition, in Davies, VI, p. 35, n. 9 is given not a parapet which is said to come from a block from a parapet built into the house which then covered the painted pavements at Et Till. I have no doubt that this is an incomplete copy of the name under consideration, and it may even be that the block which Davies saw is the Cairo balustrade.

It is clear that all these pieces must have originated in Gem-Aten and they all appear to be parts of balustrades, and must presumably have come from the ramps or from altars. It is clear that there was more than one object bearing this name, for while most of the pieces from Amarna are of fine Qau limestone in various stages of metamorphosis, one fragment (Pl. CIII. 44) is of pink granite.

It is as well to mention here also the name of property of, three examples of which have been found at Amarna<sup>5</sup> and another at Assiut.<sup>6</sup> At Thebes a somewhat similar name has been found on blocks from Luxor and from Pylon IX at Karnak, but no example of this name has been found at Amarna itself.

- (b) A further subdivision of Gm-p3-Itn is recorded on a small limestone fragment of the base for a statue or offering stand (Pl. CII. 35). On the analogy of the size of other fragments of similar bases, about half the depth of the second line is missing, for the second line on an average varies between 4 and 5 cm. in depth. A complete translation of the name, therefore, is impossible: it would appear to be that of a small chapel or shrine.
- (c) Finally it should be noted that on a block found at Luxor9 it is stated that the Hwt-Bnbn is situated in Gm- $p_3$ -Itn. It is true that no such statement is forthcoming on any inscription found at Amarna, but there is obviously such a close relationship between the names of most of the Aten temples and their subdivisions that this should not be overlooked in any study of the names of the various parts of the temple at Amarna.

<sup>&</sup>lt;sup>1</sup> See Breasted in ZÄS. XL. 106 ff.

<sup>&</sup>lt;sup>2</sup> Just how many temples of the Aten there were in Thebes is still uncertain. The temple that was at Karnak has recently been excavated by the Service des Antiquités (Annales, XXVI. 121-7; XXVII. 143-7; XXIX. 144-5; XXX. 168, 169; XXXII. 112; XXXIII. 176, 177; XXXV. 103-6; XXXVI. 141-3). Many blocks were built into the ninth pylon. For a more detailed bibliography see Fakhry in Annales, XXXV. 38, 39. At Luxor there is no certain evidence for the existence of an Aten Temple, though a number of blocks have been published (see Fakhry's article, pp. 40-51, for bibliography and publication of some new fragments).

<sup>&</sup>lt;sup>3</sup> Davies, The Tomb of the Vizier Ramose, Pls. XXXIII and LIII: see further Bouriant in Revue Archéologique, 1882, 282, 283; Villiers Stuart, Egypt after the War, Pl. XV; von Bissing, Denkmäler der Kunst Amenophis IV, Pls. V, VI.

<sup>4</sup> Annales, XXXV. 42, 43, 46, Figs. 1, 2, 3, 6, 7.

<sup>5</sup> Davies, VI, Pl. XXXIII and p. 35. Also on the dockets COA. II, Pl. LVIII. 11 = BM. 58890 ( ) A COMMON AND CO 

<sup>&</sup>lt;sup>7</sup> Ann. Serv. XXXV. 44 and Fig. 4; cf. also 43 and Fig. 3.

<sup>8</sup> Ibid. IV. 147.

<sup>&</sup>lt;sup>9</sup> Ibid. XXXV. 42, and Fig. 1.

- 2. \(\text{\final}\) \(\text{\
- (a) \[ \] \[
- (c) Kring Market Market
- (d) The Harem. Since the Broad Hall and Wbn-Itn lie in that section of the Palace on the west of Royal Road and are said to be in Pr-hey, it follows that the building which we call the Harem, and which also lies in the same area, should be included in the House of Rejoicing. At present there is no direct and certain inscriptional evidence in favour of this. However, a lime-

<sup>&</sup>lt;sup>1</sup> P., Pl. XII. 4.

<sup>&</sup>lt;sup>2</sup> Mitt. Deut. Inst. für Äg. Alt. in Kairo, III. 34–7=Roeder, Vorläufiger Bericht über die Deutsche Hermopolis-Expedition, 1931–2, p. 36, Abb. 17.

<sup>3</sup> JEA. V. 62 and Pl. VIII.

<sup>&</sup>lt;sup>4</sup> BM. 1000, part of the base for a statue: published *PSBA*. XV. 206-15; Sandman, *Bibliotheca Aegyptiaca*, VIII. 159; Edwards, *Hieroglyphic Texts B.M.*, VIII. 27, 28, Pl. XXIV.

stone fragment from the Harem gave part of a name, \( \lambda - \frac{1}{2} \rightarrow \lambda \lambda \lambda \rightarrow \lambda \rightarrow \lambda \rightarrow \rightarro

- (e) Another part of the House of Rejoicing is recorded on a damaged fragment of sandstone from Weben-Aten (Pl. CI. 10). Unfortunately, the name is not complete.
- (f) From the Pillared Hall at the south end of the Palace (see above, pp. 60, 150) came a few scattered bricks bearing (Pl. LXXXIII. III): "---- (Ankhkheperurë (= Smenkhkarë)), the House of Rejoicing of the Aten." The impressions, unfortunately, were destroyed at the bottom, but it is very doubtful from the general appearance of the bricks whether there was room for the addition of more than one low sign (Property) below the name of Smenkhkarë. The full name, therefore, was probably "The House of (Ankhkheperurë) (in) the House of Rejoicing of the Aten". The archaeological evidence shows that this was the last part of the Palace to be built: no inscribed stones were found in the hall.
- (g) Finally, bricks with the name  $\Box \ | \ \Box \$
- 3. The Mansion of the Benben in the House of the Aten" (cf. Pl. CIII. 48). At Amarna the only clue as to the position of the Mansion of the Benben is the statement that it is in the  $Pr\ Itn$ , but a block from Luxor records that it was in  $Gm\ pr\ Itn$ , while a stela at Silsileh records the cutting of the stone "for the making of the great Bnbn of Rēc-Ḥarakhte in his name of Shu who is Aten in Ipt-swt (Karnak)". Texts in the Amarna tombs indicate that there were subdivisions to this building; the most frequent reference is to the "Court" ( $\Box$ ) in the Mansion of the Benben; in another case reference is made to the "goodly places ( $\Box$ ) which Pharaoh has made in the Mansion of the Benben in the House of the Aten". It

<sup>&</sup>lt;sup>1</sup> The tombs mention "harems" (Davies, II, Pls. XXX, XXXVI).

<sup>&</sup>lt;sup>2</sup> Several examples were found in Q. 42. 25, and one only in R. 42. 6.

<sup>&</sup>lt;sup>3</sup> Davies, I, Pl. XXX.

<sup>&</sup>lt;sup>4</sup> Ann. Serv. XXXV. 42 and Fig. 1; this presumably refers to the Theban Temple of the Aten.

<sup>&</sup>lt;sup>5</sup> LD. III. 110 i; Ann. Serv. III. 262-6.

<sup>6</sup> Davies, I, Pls. IV, XXXVII; IV, Pls. XXXIII, XLIII; VI, Pls. XIV, XVI, XXV, XXXIX.

<sup>&</sup>lt;sup>7</sup> Davies, I, Pl. XXX, pp. 34 ff. Davies suggests that these "places" may have been the Temple treasury, which he suggests was "The offering-table of the Aten" (p. 36, n. 3).

seems most reasonable to identify the Mansion of the Benben with the Sanctuary, taking this in its wider sense to include the actual building and the surrounding courts. It is here, as the reliefs in the tombs show us, that the great stela and colossus were placed. The texts tell us nothing of the nature of the Bnbn, though the normal determinative is  $\[ ]$ , but it is probable that it refers to the great stela and not to an obelisk, of which there is not the slightest trace either in the tombs or in the stone fragments that have been excavated. In this connexion the determinative  $\[ ]$  in Davies, I, Pl. XXX is significant. Finally, it should be noted that a text in the tomb of Meryre, which is a duplicate of a text in the tomb of Panehsy, substitutes Pr Itn for the Hwt Bnbn given in Panehsy's version.

The tombs give some slight indication of the ceremonies that took place in this building: requests are made for gifts from the offerings which are made in the Mansion of the Benben; Tutu prays "mayest thou follow Aten, like his favourites, in the court (wsht) of the Mansion of the Benben". Panehsy prays for gifts from the offerings made "at every festival of the living Aten in the Mansion of the Benben"; Ay prays to the King "mayest thou grant - - - the sound of thy sweet voice in the Mansion of the Benben"; and three texts give a hint of the choral side of the services by mentioning the choristers (hsyw, šmcyw, nhmw) "who rejoice in the court (wsht) of the Mansion of the Benben".

4. Though it is not stated specifically it seems probable that the "Court" (□□) and the "Court of Festival" (□□, see below, p. 197)¹¹⁰ are also parts of the Great Temple.

It is clear from the preceding discussion that though the House of Rejoicing is in the Pr Itn, some of the buildings that formed part of it were undoubtedly situated in the Great Palace. It is permissible, therefore, to conclude (a) that the term Pr Itn included not only the Great Temple but also the Great Palace, and (b) that the Great Palace was called the House of Rejoicing.

It will be recalled, however, that the Boundary Stelae mention the building of two Houses of Rejoicing, both of which are said to be situated in "the island 'Aten distinguished in jubilees' in Akhetaten" (see above, pp. 190, 193). There is reason to believe that this double mention of the name in the Boundary Stelae is no mere dittography, but records an actual fact. The stones bearing the name House of Rejoicing came from two main parts of the city site: by far the greater number came from the Great Palace, but three small pieces came from the neighbourhood of the concrete platforms and Pylon 2 in the Great Temple (P. 30, 45, 47 in the 1932–3 register of stones: not published). Clearly this is very slender evidence, but it must not be overlooked that no pieces recording subdivisions of the Great Palace were found in the Temple area, and our experience leads us to believe that on the whole the inscribed stones were found in or near the places in which they were originally placed. There is support, therefore, for the statement of the Boundary Stelae. Moreover, the materials of the stones from the two sections differ: the fragments from the Temple area were granite or crystalline sandstone, those from the Great Palace were mainly limestone.

Furthermore, the Boundary Stelae appear to show that these two buildings were erected at

9 Ibid. II, Pl. IX.

<sup>&</sup>lt;sup>1</sup> For these, see Pendlebury's remarks, above, p. 11.

<sup>Ibid. II, Pl. XXI.
Ibid. VI, Pl. XIV.</sup> 

<sup>7</sup> Ibid. VI, Pls. XXV, XXXIX.

<sup>&</sup>lt;sup>2</sup> Davies, I, Pl. XXXIX.

<sup>4</sup> Ibid. II, Pls. IX, XXI; VI, Pl. XV.

<sup>&</sup>lt;sup>6</sup> Ibid. II, Pl. IX.

<sup>8</sup> Ibid. I, Pls. IV, XXXVII; IV, Pls. XXXIII, XLIII; VI, Pl. XVI.

<sup>10</sup> Ibid. III, Pl. XIX.

different times. It is easy to attach too much importance to the occurrence (in K) of \_\_\_ with reference to the second House of Rejoicing, especially since X uses \_\_, but may it not indicate that the one was already built when the Boundary Stelae were set up, and that the other was in the course of erection? It is, indeed, significant that this is precisely what is indicated by a study of the dating material. The analysis of the occurrence of the names and titles of the Aten on p. 185 shows clearly that there is overwhelming evidence in favour of an early date for the Great Palace, and that on the other hand the later form of the doctrinal name is more frequent than the early form at the west end of the Temple area. There is thus some reason for accepting the testimony of the Boundary Stelae that there were two Houses of Rejoicing at Amarna: the earlier one was the Great Palace, and the later was probably the concrete platforms.

But the Boundary Stelae say that these buildings were in the "island 'Aten distinguished in jubilees'". It seems exceedingly unlikely that "island" is to be taken literally, and it is even more improbable that it can be identified with any existing island in the river, for the islands are liable to change yearly and it is certain that in the Eighteenth Dynasty the river ran considerably farther west than it does now. Moreover, if there were an island with two more Houses of Rejoicing on it, we should have at least four buildings of this name in the city, and that is surely excessive. But the Houses of Rejoicing of which we do know are both situated in the Pr Itn, and it therefore follows that the term "island" must be taken figuratively. There are two possibilities: either it refers strictly to the Pr Itn, to the Temple as well as the official Palace, or it may have a slightly wider application and include both the Ḥwt Itn and the Pr Itn. While it cannot be proved, this latter possibility seems the more attractive one, and it may be suggested that the "island 'Aten distinguished in jubilees'" was nothing less than the kernel of Akhetaten, the central and vital portion of the whole city, which is the subject of this present memoir.\footnote{1}

It may be recalled also that the Palace of Amenophis III south of Medīnet Habu, or a part of it at least, appears to have been called the House of Rejoicing<sup>2</sup> and possibly Akhenaten may have been influenced by this when naming his own palace. So, too, in Ptolemaic texts the House of Rejoicing is applied to the King's palace and to the temple as the palace of the god.<sup>3</sup>

According to Wb. III. 40 Pr-hey was also the name of the building or room in which the sed-festival was celebrated. This function of the House of Rejoicing is also recorded in Ptolemaic times at Edfu.<sup>4</sup> It is impossible to say definitely that the House of Rejoicing in the Great Temple had any connexion with the sed-festival for there is no material that has any bearing on it, but it is significant that the part of the Temple which we are inclined to identify with the House of Rejoicing is divided into two sections, a northern and a southern, a subdivision which accords well with a building for the celebration of the jubilee. If this suggestion is correct, and

¹ Cf. JEA. XXVII. 48, where Gardiner points out that Egyptian iw "island" need not necessarily refer to islands in our sense of the word.

<sup>&</sup>lt;sup>2</sup> Inscriptions in the tomb of Kheruef explicitly call the Palace of Amenophis III "the House of Rejoicing" (cf. Ann. Serv. XLII. 491, 492). See also the inscribed brick Nb-Mrct-Rc m Pr-hcy (Hölscher, The Excavation of Medinet Habu, II. The Temples of the Eighteenth Dynasty, Fig. 6 (g) on p. 7).

<sup>&</sup>lt;sup>3</sup> The name occurs fairly frequently at Edfu: e.g. Chassinat, Le Temple d'Edfou, II. 4, 3; III. 110, 3; 114, 12; IV. 299, 15; V. 39, 4; 160, 17; 217, 5; VI. 18, 14; Chassinat, Mammisi, 139, 12; 148, 6.

<sup>&</sup>lt;sup>4</sup> Chassinat, Le Temple d'Edfou, I. 52, 10; 257, 9-10 = XI, Pl. CCCIV; IV. 229, 15.

it is no more than a suggestion, it must be presumed that the House of Rejoicing in the Great Temple also bore the name "The Court of Festival" (see above, p. 195).

Lack of material hinders a precise identification of Gm ps Ttn with any certain part of the temple. At Luxor, it is true, a block says that The Mansion of the Benben was in Gm ps Ttn (see above, p. 192), as though Gm ps Ttn was either the Sanctuary or another name of the whole Temple. It is hardly likely to have been the name of the Temple at Amarna, for then one might have expected at least one fragment mentioning that the Pr-hcy was in it. For the present, therefore, it is necessary to consider that this name was applied to a separate unit, and since The Mansion of the Benben was the Sanctuary and the House of Rejoicing seems to have been the part represented by the concrete platforms, the intervening space, the series of sunken courts with bases for offering-tables or statues, seems the most likely place for the Gm ps Ttn.

There is no evidence for the exact position of the "Sunshade" of Meritaten, beyond the fact that it lay in the House of Rejoicing. The most likely possibility is that it formed part of the official palace.<sup>1</sup>

To sum up, therefore, the results of our study of the *Pr Itn*, the following conclusions have been reached:

- i. The "island 'Aten distinguished in jubilees' in Akhetaten" was the central portion of the city.
- ii. The Pr Itn consisted of the Great Temple and the official portion of the Palace.
- iii. The chief divisions of the Great Temple were:
  - (a) The House of Rejoicing: the concrete platforms, or possibly the whole area between the entrance and Gm ps Itn.
  - (b) Gm p; Itn: the series of sunken courts.
  - (c) The Mansion of the Benben: the Sanctuary.
- iv. The chief divisions of the official Palace, which was known as the House of Rejoicing, were:<sup>2</sup>
  - (a) The Harem (the pryt hmt-nsw?).
  - (b) The "Wbn Itn of Akhenaten".
  - (c) The Broad Hall.
  - (d) The "Sunshade" of the Princess Meritaten (?).
  - (e) The House of 'Ankhkheperurē': the Pillared Hall, the last part of the official Palace to be built.

### C. THE PALACE, AND BUILDINGS ASSOCIATED WITH ROYAL PERSONAGES

We possess the names of many buildings of an official nature which are clearly associated with members of the royal family. It is impossible to assign an exact position to most of them; indeed, many may simply be alternative names of parts of the Palace with which we have already dealt. These names are listed below, but no attempt is made to give references to the occurrences of such names as pr nsw, ch, or ipt nsw, all of which occur in the tombs. It should

<sup>&</sup>lt;sup>1</sup> In the official palace the name of Meritaten was found 16 times, including 3 times in association with Meketaten; Meketaten was found 4 times (3 times with Meritaten); there were 2 instances of Ankhesenpaaten.

<sup>&</sup>lt;sup>2</sup> This list naturally does not exclude the possibility that there were other sections of the Palace whose names have not come down to us.

be pointed out that the name "house of X" may not necessarily refer to a residence, in some cases it may be the name of a storehouse, and often it is clear the best rendering is "estate", but since we have not the information to enable us to decide with certainty, no attempt is made here at further subdivision.

# 1. Buildings connected with Akhenaten

- (a) Pryt pr G: "the apartments of Pharaoh." If the apartments of the Queen are the Harem, it is possible that the apartments of Pharaoh is the name given to the private portion of the Palace, on the east side of Royal Road. They are mentioned in stelae K and X (Fig. 26), in Griffith, Hieratic Papyri from Kahun and Gurob, Pl. XXXVIII and pp. 91, 92, and probably also in Davies, VI, Pls. XVIII, XVIII.
- (b) Pr Imnhtp ntr hks wsst: records the early name of Akhenaten: is mentioned on a hieratic docket, P., Pl. XXII. 12 (cf. also COA. I, Pl. LXIV. 22), and on a jar sealing, P., Pl. XXII. 2, and probably on our sealing 18.
- (c) Pr Itn-3h-n: Davies, III, Pl. XXVII; Nicholson, Aeqyptiaca, Pl. 2; on hieratic dockets, Nos. 22-7; P., Pls. XXII. 8; XXIV. 88; COA. I, Pl. LXIV. 66-9; on jar sealings, Pl. LXXXI. 23; P., Pl. XXI. 3-5; COA. I, Pl. LV. I.
  - (d) Pr Nfr-hprw-R': once only, P., Pl. XXII. 10.
- (e)  $\not Hwt \ Nfr-\not hprw-R^r$ : occurs twice: Pl. LXXXI. 20, and on a hieratic docket, COA. II, Pl. LVIII. 24. With these two buildings compare also our stoppings Nos. 19, 21, and 22, in which both pr and  $\not hwt$  are lost.
- (f) A name of frequent occurrence is Pr Shtp Itn. Opinions differ as to the nature of this building: Breasted considered it the name of a temple; Griffith thought that Shtp Itn was the name of a king, and in this he was followed by Davies, but Gunn was not of the same opinion. I am inclined to the view that Shtp Itn is an epithet of a royal person. It might just possibly refer to the Queen, who in one instance is said to "propitiate the Aten with (her) sweet voice"  $(shtp \ pr \ Itn \ m \ hrw \ ndm)$ , but the alternative that the epithet refers to the King is far more attractive. A scarab in the British Museum actually gives this as an epithet of Akhenaten: (shtp) = (shtp

In view of the similar name  $Shtp\ R^{r}$  which occurs twice on jar stoppings (Pl. LXXXII. 66; P., Pl. XXI. 21), doubts have been experienced about the reading of those cases in which  $\circ$  is substituted for  $\circ$ , with the variant in certain jar stoppings of  $\circ$ , and Gunn has suggested that these should be read  $Shtp\ R^{r}$  also. The question is not easy to decide, but there is no inherent reason why  $\circ$  should not read Itn, while the form  $\circ$  favours Itn rather than  $\circ$   $\circ$ 

4 COA. I. 166, n. 6.

<sup>&</sup>lt;sup>1</sup> Breasted, Ancient Records, II, p. 411.

P. 33.
 Davies, V. 5, n. 1.
 Davies, VI, Pl. XXV, lines 21-2.

<sup>&</sup>lt;sup>6</sup> B.M. 30596 = Hall, Catalogue of Scarabs, I. 196.

<sup>&</sup>lt;sup>7</sup> Davies, IV, Pl. XXXIX. <sup>8</sup> Ibid. V, Pls. II, IV.

<sup>9</sup> COA. I. 144, n. 2.

being, perhaps, influenced by such writings as 0 on the jar stoppings. My impression is that the form  $Shtp R^r$  is an early epithet of Akhenaten which was later changed to Shtp Itn, but there is insufficient dated material to establish the point. The probability, therefore, is that Pr Shtp Itn and  $Pr Shtp R^r$  are one and the same building, and that the most likely translation is "House of him who propitiates the Aten" rather than "House of Aten is propitiated".

The precise nature of the building is quite uncertain, but it is mentioned frequently: cf. Davies, V, Pls. II, IV; COA. I. 145, Fig. 29; in hieratic dockets and ostraca Nos. 2, 111–14; COA. I, Pl. LXIV. 14–19; II, Pl. LVIII. 25, 26; P., Pl. XXII. 5, 19–22; on jar stoppings 66–9, cf. 22; COA. I, Pl. LV. P, Q, T; II, Pl. LVII, E (?); P., Pl. XXI, 19–21.

# 2. Buildings associated with members of the Royal Family

(i) Connected with Nefertiti. The House of Nefertiti is mentioned on the hieratic dockets 28–30; COA. I, Pls. LXIII. I; LXIV. 1, 2; and on jar stopping 24. Other texts refer to her harem (Davies, II, Pls. XXIX, XXXI; for another possible name of the Harem see p. 194), her treasury (ibid., Pl. XXXI), and to her storehouse (wds: Pl. LXXXI. 25).

In addition, reference is sometimes made to the House of the Great Royal Wife (e.g. Pls. LXXXI. 26; LXXXVI. 33; COA. I, Pl. LXIII. G, K; P., Pls. XXII. 11, 23; XXIV. 90) or the still-room (3hyt) attached either to that building or to some other building associated with the Queen (cf. docket 245, and perhaps 208, 246, 247, 265, and p. 171, n. 2), or to her Sunshade-temple (see below, p. 201). In all these cases it is probable that the reference is to Nefertiti.

- (ii) Connected with Meritaten. Her "house" is mentioned in dockets 39, 40; Liverpool Annals, XVII. Pls. XXIII. 1; XXV. 20; XXVII. 1, 17; XXIX, bottom; COA. I, Pl. LXIII. R. For her Sunshade-temple see below, pp. 201, 206.
- (iii) Connected with Meketaten. Her "house" is mentioned in dockets 37, 38, and on unpublished dockets 33/4:247; 35/6:157.
- (iv) Connected with Ankhesenpaaten. Her "house" (?) is mentioned once only, in docket 41. For the Sunshade-temple of her daughter, which was probably at Hermopolis, see below, p. 202.
- (v) Connected with Smenkhkarēc. Dockets 35 and 36, using either his nomen or prenomen, refer to his "house", which is also recorded on some unpublished jar stoppings from Professor Griffith's excavations in the North Palace. For the association of the Coronation Hall with him see above, pp. 60, 150, 194, and Pl. LXXXIII. III.

# 3. Buildings connected with Amenophis III and his family

- (i) Amenophis III. Several buildings associated with this king are known at Amarna. On the question whether he was actually at Amarna see above, pp. 152-7.
- (a) The House (pr) of Nebma'rē' is mentioned in Davies, IV, Pl. XXXV; it also occurs on dockets 17, 18; COA. I, Pl. LXIV. 23-5; P., Pl. XXII. 4, 7.
- (b) The Mansion (hwt) of Nebma'rē': occurs on dockets 19, 20; and on jar stoppings 15, 16; cf. P., Pl. XXI. 1.

<sup>&</sup>lt;sup>1</sup> Gunn (COA. I. 166, n. 10) considers that this does not refer to Meritaten.

- (c) The House of Nebma'rē' in the barque: occurs only on Pl. LXXXV. 16 and the unpublished 24/629 = BM. 57464 +57466 from Professor Griffith's excavations.
- (d) The House of Aten-gleams: is mentioned on docket 237 and COA. II, Pl. LVIII. 15, and far more frequently on jar stoppings, e.g. stoppings 61-5; COA. I, Pl. LV. QQ (?); COA. II, Pl. LVII. F; P., Pl. XXI. 24. Ahmed Bey Kamal found numerous other examples near the temple of the Sphinx (Ann. Serv. X. 117).

I am inclined to think that then Itn in all these examples is an epithet of Amenophis III, to whom this term is sometimes applied. For then itn as an epithet of Amenophis III see Wb. V. 329; ZÄS. LIX. 110, n. 10; Mém. de la mission franç. XV. 15; BM. 1210 = PSBA. XXIII. 218, 219; Edwards, Hieroglyphic Texts, VIII, Pl. XIII. Legrain has published some canopics which contain references to the same name (Ann. Serv. IV. 138-49). Legrain's examples give the following variants: Pr then itn (Nos. 23, 24, 26), Pr then itn pr cr (Nos. 17, 18), itn then pr cr (Nos. 16, 29), and also mention niwt n then itn (Nos. 20, 21). Borchardt considered that Pr then itn was a name of the Palace of Amenophis III south of Medinet Habu (MDOG. No. 57. 25), but while this may be so, though rather unlikely (it should be noted that the excavations of the Metropolitan Museum show that part of that Palace at least was known as the House of Rejoicing, Pr-hcy, see above, p. 196, n. 2), there is no reason to doubt that the Amarna examples refer to a building of the same name at Amarna.

- (ii) Tyi. The House of Tyi is mentioned frequently in the tomb of Ḥuya at Amarna (Davies, III, Pls. XV-XVII, XIX, XX, XXXVI) and twice on hieratic dockets (Pl. LXXXV. 21; P., Pl. XXII. 14). In the tomb of Ḥuya reference is also made to her harem and her treasury. For her Sunshade-temple see below, pp. 201, 203-5.
- (iii) Baketaten. The "house" of this daughter of Amenophis III and Tyi is only mentioned once, Pl. LXXXVI. 42.

### 4. Buildings connected with the royal ancestors

It appears that there were at Amarna not only the "houses" or "estates" of the King, his family, and his parents, but also estates of certain of his ancestors. One of these, that of Tuthmosis IV, was in the House of the Aten in Akhetaten. It is clear, therefore, that it was either a building in that part of the city covered by the term "House of the Aten" or a chapel in the Great Temple. The material is so scanty and incomplete that it is impossible to advance any further suggestions as to the nature and position of these buildings.

The royal ancestors whose "houses" were at Amarna are Tuthmosis I, cz-hpr-kz-R<sup>c1</sup> (Pl. LXXXI. 14; P., Pl. XXII. 10; COA. II, Pl. L. 274), Amenophis II, cz-hprw-R<sup>c</sup> (Davies, V, Pl. IX), and Tuthmosis IV (Wilkinson, Modern Egypt, II. 73; ZÄS. LV. 32–3; Bibl. Aeg. VIII. 162).

### D. THE TEMPLES KNOWN AS "SUNSHADE"

In addition to the Great Temple and the Smaller Temple, there existed at Amarna a type of temple which bore in Egyptian the name of "sunshade", but which, as we shall see, had externally no resemblance to the object so called in English, nor even to the object that served

<sup>&</sup>lt;sup>1</sup> In this connexion it is interesting to recall that in the great Tutankhamūn stela (Cairo 34183 = Lacau, Stèles du nouvel empire (CCG.), 224 ff. and Pl. LXX; most recent translation is that of Bennett in JEA. XXV. 8-15) it is recorded in line 11 that the King was in his Palace "which is in the estate of 'Akheperkarē'": cf. also Bennett's note 25, JEA. XXV. 12.

the same purpose in Ancient Egypt. The name is invariably written with the hieroglyph  $\uparrow$  depicting the ostrich-feather fan used to ward off the rays of the sun from the King or some other royal personage. To this hieroglyph are added the feminine ending  $\circ$  and the stroke is which regularly indicates that the entire word means what its principal sign depicts, as well as the name of the sun or sun-god  $\circ$ ,  $\circ$ ,  $\circ$ ,  $\circ$ , &c., and in later times  $\circ$  \( \sum\_{\text{N}} \) \( \sum\_{

# 1. Sunshades in texts of the Amarna Period

The inscriptional evidence from Amarna is exceedingly ambiguous, partly because in many cases the building is mentioned in damaged and incomplete texts, and partly because almost every other example is to be found in stereotyped and formal contexts. Our examples (a), (c), (d), and (g) are taken from the short texts that occur at the top of stelae or above the reliefs in the tombs. These short texts are similar in form and read: "The living and great Aten, who is in jubilee (var. lord jubilees), lord of all that the Aten encircles, lord of heaven, lord of earth, in (var. lord of) X in Akhetaten." Our example (f) is similar to these, but comes from the stone block on which a statue was placed. The examples (e), (h), and (i) are from hieratic dockets, most of which are fragmentary. Only in (b) and (j) is the full context preserved.

- (a) The Sunshade of the king's mother, the great royal wife [Tyi]": Davies, III, Pl. VIII. In the title of the scene it is stated that the King is leading Tyi to show her \( \frac{\mathbb{K}}{100} \), "her Sunshade".
- (b) The property of the [great] royal wife ----": Davies, V, Pl. XXX = K. 15; Pl. XXXII = X. 17. The quotation is from that passage in Boundary Stelae K and X (quoted in full in Fig. 26) in which Akhenaten enumerates the chief buildings which he is erecting at Amarna. The Sunshade is probably that of Nefertiti.
- (d) Gunn has shown that the Sunshade of Meritaten was not originally erected for her, but was made for a queen. The traces of the original name, over which (c) has been cut, show  $\mathbb{R}^{\circ}$   $\mathbb{R}^{\circ}$   $\mathbb{R}^{\circ}$   $\mathbb{R}^{\circ}$   $\mathbb{R}^{\circ}$  (COA. I, p. 153). There can be little doubt that the missing name was that of Nefertiti.
- (e) An unpublished hieratic docket (24/114) from Professor Griffith's excavations mentions \[
  \begin{align\*}
  \begin{align\*}

<sup>&</sup>lt;sup>1</sup> For full references see above, p. 193, n. 4. I have not quoted the full titles of the Princess and the name of her mother.

- (g) A These words form the beginnings of several short vertical columns of text, the ends of which have been lost. The most likely restoration would appear to be to swt-[Rc n] sot-[nsw] n ht[f mrt-f cnh-s]-n-po-itn [ms n sot-nsw cnh-s]-n-po-itn. The Sunshade would therefore appear to be that of Ankhesenpaaten the younger, the daughter of Ankhesenpaaten and Akhenaten. Since the block was found at Hermopolis it is possible that it is there that this Sunshade was situated.
- (h) Maria (a) Maria (b) Maria (c) Ma
- (i) Four further instances of Sunshades are published in this volume, Pl. LXXXVIII. 107–10, and are translated above, p. 165. They are unfortunately much damaged, but 107 clearly refers to a building in Akhetaten, and the others are (Sun)shades of 'Ankh-Rē'; cf. also p. 171, n. 2.
- (j) In a short version of the hymn to the Aten, which is found in the tombs of Meryre, Api, and Tutu at Amarna, there occurs another reference to a Sunshade. The hymn describes the rising of the Aten: "men live when thou sendest forth thy rays, every land is in festival, the singers (hsyw), the choristers (smcyw) and the musicians (nhmw) rejoice" = \( \frac{1}{2} \) \(

The inscriptional evidence from Amarna indicates that the Sunshades were to be found not in Amarna only, that they could either be attached to a larger temple or be independent shrines, and that there was a special connexion with the royal ladies.

### 2. Sunshades in texts of other periods

- (a) "Thou eatest \*\* ins-bread in the presence of Ptah at the great stairway of the Lord of the Ennead, \*\* Instruction in the place in which he is on the altar (?) of the Sunshade, thou departest thence with Hu": Urk. IV. 497, 17–498, 2: reign of Hatshepsut.
- (b)  $\sim \text{Inc.} \text{Inc.}$
- (c) The Sunshade which is in the great fortress<sup>3</sup> of the king": Leiden I. 350. 4, 26; cf. Rec. 17. 148, 159, 160: a prophet (hm-ntr) of the Sunshade is mentioned; in the following line reference is made to a web-priest.
  - (d) 图图 图 图 图 图 Incomplex for their districts":

<sup>&</sup>lt;sup>1</sup> See Davies, IV, Pls. XXXII, XXXIII, where the texts are set out in parallel.

<sup>&</sup>lt;sup>2</sup> I owe this reference to material from the Wörterbuch supplied to Sir Alan Gardiner by J. J. Clère. The Wörterbuch material includes three further examples (LD. III. 68, 7; Pap. Berlin 3056. 8, 11; Metternich 243) which do not appear to refer to the \*swt-R\*\* under discussion here.

<sup>&</sup>lt;sup>3</sup> Sfly is a fortress of some kind, but its precise nature is quite uncertain. Cf. Anast. V. 20, 4; see also Wb. IV. 177. Gauthier, Dict. des noms géog. IV. 148, translates "maison d'été".

Harris 60, 8: from the enumeration of what the King did for the local gods and goddesses, to whom the pronoun "their" refers.

- (e) The Sunshades which are in this land": Pap. Bibl. Nat. 197, I, 10 = Spiegelberg, Corresp., p. 56; cf. also Pap. Bibl. Nat. 197, I. 1.
- (f) In the Wilbour Papyrus<sup>1</sup> a number of different temples of the kind are mentioned, each possessing its own lands. The name is regularly written as  $\frac{2}{3}$   $\frac{2}{3}$   $\frac{2}{3}$   $\frac{2}{3}$   $\frac{2}{3}$   $\frac{2}{3}$ , "The (sun)shade of Rē'-Ḥarakhte", except when space demands its abbreviation, in which case the element Ḥarakhte is omitted. These "Sunshades" are said to be in a number of towns, e.g. Herakleopolis, Spermeru, and Saka. On the recto § 29 (16, 28) has the heading "The (Sun)shade of Rē'-Ḥarakhte which is in this house", namely the House of Sētekh (of Spermeru), see § 28. This, Gardiner thinks, need mean no more than that the temple in question was subsidiary to the chief local temple, just as m pr lmn "in the House (or Estate) of Amūn" is frequently appended to such a great and relatively independent sanctuary as the Ramesseum or the temple of Medīnet Habu. In fact, the mentions in Pap. Wilbour do but corroborate the statement made in the Harris Papyrus (above, 2 (d)), which suggests that the principal local deities might each as a matter of course expect to have built a "Sunshade" of his or her own. The papyrus dates from the 4th year of Ramesses V.

# 3. The Nature of the Sunshades

It is possible, however, to be a little more precise from the archaeological point of view, for the Sunshade of Tyi is depicted in one of the tombs, and that of Meritaten has been excavated at Maruaten.

The Sunshade of Tyi is depicted in the tomb of Ḥuya at Amarna.<sup>2</sup> It is relatively simple and consists of an outer, colonnaded court, between whose columns are thirty-two statues of Amenophis III, Akhenaten, and Tyi. Beyond this lies a small colonnade with more statues, which leads to three more open courts, flanked by various small chambers, in which are alters

<sup>&</sup>lt;sup>1</sup> Gardiner, The Wilbour Papyrus, I, passim; II. 16.

or statues. It clearly follows the normal and natural plan of a sun-temple, the colonnades presumably being for the protection of the statues.

The nature and position of the building were first discussed by Davies, who assumed that the Sunshade formed part of the Great Temple. Since the tomb drawings of the two buildings differ considerably, he explained the difference by suggesting that the Great Temple had undergone reconstruction. It can readily be admitted that the plan of the Temple did undergo, in parts, considerable modification, but there is no suggestion or proof that this modification involved the building of the Sunshade within it. Moreover, it will be realized from a study of earlier chapters in this memoir and the plates and plans that refer to them, that while the plan of the Great Temple, based on the results of the excavations, corresponds to a remarkable degree with the plan that can be deduced from a study of the tomb reliefs, there is no place in it for any building resembling the Sunshade of Tyi. The inevitable conclusion imposes itself that it was not part of the Great Temple or its sanctuary.

This conclusion is reinforced if the inscriptions which accompany the drawing of the building are studied. At Amarna scrupulous care is taken to indicate the relationship of small buildings with the larger constructions of which they formed part. In the tombs this indication is furnished by the inscriptions which accompany the names of the Aten. Thus both Temple and Palace are invariably "in the House of the Aten in Akhetaten". In the case of the Sunshade of Tyi the position is quite different. No inscription is known that states that it formed part of any other building,<sup>2</sup> and even in the drawings of the Sunshade itself it is simply said to be "in Akhetaten".<sup>3</sup>

These facts can have only one explanation—the Sunshade of Tyi was not part of the Great Temple. It is possible to go farther and to deduce from the results of the study of the placenames that it is not likely to have formed part of the Palace and that very probably it was not even situated in the central portion of the city.

A slight clue to the possible position of the Sunshade of Tyi seems hitherto to have been overlooked. In the relief in the tomb of Ḥuya the lowest register is devoted to river-side scenes. Davies sees in these merely a decorative motive,<sup>4</sup> but this is not necessarily so. No other drawings of temple buildings show a similar decoration, and it may be suggested that the Sunshade, like the Palace,<sup>5</sup> was close to the river.

It is reasonable, therefore, to look for this building in a part of the city outside the central area and by the river side. It was clearly no small building, and hence it must be either one of the larger buildings already excavated or it must lie under the modern cultivation. The only buildings that seem likely are Maruaten,<sup>6</sup> the River Temple,<sup>7</sup> the Northern Palace,<sup>8</sup> or the northernmost palace opposite the north expedition house.<sup>9</sup> Maruaten and the North Palace may immediately be rejected, for the plan of these buildings does not agree with that of the

<sup>&</sup>lt;sup>1</sup> Davies, III. 19-25; cf. also II. 20, 27.

<sup>&</sup>lt;sup>2</sup> Baldwin Smith, Egyptian Architecture as Cultural Expression (Appleton, 1938), pp. 175, 177, states that "according to the inscriptions" the Sunshade of Tyi formed part of the Great Temple. This statement is devoid of all foundation. His study of the Temple is mistaken and full of errors, and is valueless for scientific study of the Temple.

<sup>3</sup> A similar omission of all topographical information except for the words "in Akhetaten" will be found in the representation of the Hall of Foreign Tribute; cf. Davies, III, Pl. XIV, and below, p. 209.

<sup>&</sup>lt;sup>4</sup> Davies, III. 9.

<sup>&</sup>lt;sup>5</sup> Cf. *ibid*. V. 3 and Pl. V.

<sup>&</sup>lt;sup>6</sup> COA. I, Chap. V and Pl. XXIX.

<sup>&</sup>lt;sup>7</sup> Ibid., Chap. VI and Pl. XLI. <sup>8</sup> JEA. X. 294-8; XII. 4-9.

<sup>9</sup> Ibid. XVII. 242-3; XVIII. 143-5.

Sunshade. The northernmost palace is almost completely buried under the cultivation and its plan is without value. Since it appears, however, to have been connected with Nefertiti, it too may be rejected. Thus we are left with the River Temple. Here, once more, the encroachment of the cultivation has resulted in the burial of the greater part of the building and it is impossible to identify any part of the existing portion with the Sunshade of Tyi. The most that can be said is that it is likely that this building was either a part of the River Temple or some riverside building, possibly south of the Great Temple, now lost under the cultivation.

Before we close this discussion of the Sunshade of Tyi, however, it is necessary to add a word of caution. Previous attempts to establish the nature of this building have been complicated by the attempt of Davies to fit it into the Great Temple, and by the assumption that the Sunshade of Tyi must be the whole of the temple depicted in the tomb of Ḥuya. Is this assumption necessary or justified?

From the rather meagre evidence that is available there appear to be grounds for believing that the "Sunshades" were essentially kiosks, or kiosk-like structures, either completely independent of any other building or forming self-contained units within, or attached to, larger buildings. If the entire building depicted in the relief in the tomb of Ḥuya is the Sunshade of Tyi, it has to be admitted that it forms an exception to the rule.

It is worthy of note that in the relief the titulary of the Aten and the ordinary sign-manual of the Disk occur twice. The first occurrence is over the figures of Akhenaten and Tyi and is entirely devoid of any topographical indications or references. A vertical line of text in front of Akhenaten tells us that he is leading Tyi to "her Sunshade". Since the King and his mother are already standing in the forecourt of the Temple, this may perhaps indicate that the term "Sunshade" refers not to the whole temple but to some portion of it that still lies ahead of the royal pair.

Hence it is not without significance that the second occurrence of the titulary of the Aten, which this time includes a specific mention of the Sunshade of Tyi, is found over the rear portion of the Temple, as though the Sunshade were situated there.

At the rear of the Temple, and exactly on the axis, is a small building, built on a low pedestal and approached by a few steps on which, facing inwards away from the entrance of the main temple, are either figures¹ or statues of Amenophis III, Tyi, Akhenaten, and Nefertiti. This little building can without much difficulty be reconciled with the type of construction that, it is suggested, seems to form a typical "Sunshade". Admittedly this is a minute building to be the object of the royal visit, but if it is the Sunshade, it would certainly have been small, and the artist could not have enlarged or emphasized it without seriously disturbing the proportions and balance of the whole scene. I do not think there is sufficient evidence to decide the question one way or the other, and these cautionary remarks are intended only to draw attention to the fact that the interpretation of the Sunshade of Tyi raises problems of a special order, and that it is not certain whether the Sunshade is the whole temple or only the little kiosk that lies at the rear.

<sup>&</sup>lt;sup>1</sup> Note that if these are really actual living figures, we may have another item of evidence in support of the coregency of Amenophis III and Akhenaten. This was omitted from the discussion above (pp. 154–6) because it is uncertain whether they are living beings or statues. Their attitude and direction do in fact suggest human beings, and Davies only suggested that they might be statues because at the time at which he wrote the possibility of a coregency had not been envisaged (see Davies, III. 23).

That the Sunshade of Meritaten was at Maruaten is beyond all dispute, and there can be hardly any less doubt that it was one of the buildings forming Maruaten II.<sup>1</sup> This complex consisted of a small temple and, to the north of it, an artificial island on which were three small buildings or kiosks. It has been suggested that the Sunshade was one or all of these island kiosks.<sup>2</sup>

My own impression is that the Sunshade was the central kiosk on the island. It is a building of most interesting plan.<sup>3</sup> It consists of a platform square in shape, approached from the south by a long flight of shallow steps, and with a second stairway on the north. The only internal feature of the building was the base for an altar. At the edges of the platform were columns engaged in a screen wall which reached almost to the capitals, which themselves supported a cornice. In the publication (COA. I. 122) it was considered that the columns supported a roof. Such a reconstruction does not appear very likely, for not only would it demand a span of over 5 metres, but an Amarna shrine or chapel with a roof is opposed to all that we know of Amarna religious architecture. It seems far more reasonable to suppose that the building was open to the sky.

It will be seen that this building was a good example of an Egyptian peripteral temple, adapted to the requirements of the Aten cult, though the screen wall with engaged columns is a refinement which, to the best of my knowledge, first occurs at Amarna. This, I believe, was the Sunshade of Meritaten. I feel too that it is likely that the other Sunshades of the Amarna period were of similar plan, the Sunshade of Tyi, however, being different, perhaps, from the other buildings of the same time that bore the same name (but see above, pp. 203, 205).

Egyptian peripteral temples have been studied in considerable detail by Borchardt.<sup>4</sup> It is evident that the constructions which it is suggested here may have formed the Amarna Sunshades do not correspond exactly with any of the classes of Egyptian peripteral temples studied by Borchardt, but they have points of resemblance with some. The form of the Sunshades, as suggested in this present volume, is a combination of elements found in what Borchardt calls "kiosks"<sup>5</sup> and "Kapellen mit Pfeiler-Umgang".<sup>6</sup> The "Sunshades" resemble the former in the use of the screen wall with engaged columns and the absence of an inner room; they differ by being built on a pedestal. They resemble the latter by reason of their being built on pedestals, approached by ramps, but differ in other respects, particularly in the absence of the inner room. The "kiosks", of which all surviving examples are of the Late Period, when on the ground level were used as the resting-places for divine statues or barks in the course of processions, but those which were built on the roofs of temples, e.g. at Edfu and Denderah, were also used, as the texts inform us, in the mysteries of Osiris, the New Year festivals, and certain ceremonies connected with the accession of the King. The Chapels, which

<sup>1</sup> COA. I. 119-24 and Pl. XXIX.

<sup>&</sup>lt;sup>2</sup> Ibid. 123, 158.

<sup>&</sup>lt;sup>3</sup> Borchardt, Ägyptische Tempel mit Umgang, 78, n. 1, does not accept Newton's published reconstruction for reasons that are obscure, except for the statement that the reconstruction is a greater tribute to Newton's imagination than to his knowledge of Ancient Egyptian buildings. On the contrary, apart from a few minor points of detail, the reconstruction appears to be fair and reasonable, and, as we shall see below, has parallels at Amarna.

<sup>&</sup>lt;sup>4</sup> Op. cit. (Cairo; Selbstverlag, 1938). To Borchardt's bibliography on p. 1, n. 2, add now: Baldwin Smith, Egyptian Architecture as Cultural Expression, 149-52, Pls. XLIII, XLIV; Hölscher, The Excavation of Medinet Habu, II. The Temples of the Eighteenth Dynasty; von Bissing, Die Baugeschichte des südlichen Tempels von Buhen (Sitzb. Bayer. Akad. d. Wiss. Phil.-hist. Abt. Jahrgang 1942, Heft 9).

<sup>5</sup> Borchardt, op. cit. 13-20.

<sup>6</sup> Ibid. 56-105.

Borchardt derives from the Jubilee Hall of the King, were also employed as resting-places for cultus images or sacred barks at various stages of festivals and processions.

That the Amarna Sunshades did not conform exactly with the other types of peripteral temples is not necessarily proof that the deductions and suggestions made here are wrong. The Amarna temple was the peculiar product of the Amarna Age and there is no reason why the Amarna Sunshade also should not have had an individual and special form. What is certain is that the form of the Sunshade which we can deduce from Maruaten, and perhaps from the relief in the tomb of Ḥuya, is a form that was used at Amarna for other buildings, not necessarily of a religious nature. Thus the same type of building occurs in the royal storehouses and as the Hall of Foreign Tribute.<sup>2</sup> Slightly different in several respects, but still showing a resemblance in the use of the screen wall and columns, is the portico in the Palace in which the Window of Appearances was placed.<sup>3</sup>

It is of interest for our study to note that there actually exist small shrines of the Amarna Age which resemble closely, and are obviously related to, the suggested form of the Amarna Sunshades. The Society's excavations at Sesebi (Sudla) in the Sudan have revealed a small chapel of the Amarna period, slightly to the north-east of the main temple. The original building has undergone a certain amount of modification and has been enlarged, but in its earliest stage it consisted of a square platform approached by stairs from the west. Although it was badly damaged, numerous fragments of columns were found. It is certain that these fragments could not have come from columns inside the building and that the only places on which the columns could have stood were round the edges of the platform. It is equally certain that the building must have been open to the sky.

Ruins of a somewhat similar shrine of the same period were found many years ago at Amada.<sup>6</sup> As at Sesebi, all that remains is a square platform approached from the west by a ramp. Fragments of columns were found and Borchardt's plan indicates the position of two pillars. The position of the pillars is somewhat puzzling, for they occur some 3 metres back from the edge of the platform, where there appear to be no indications of either columns or pillars. In view of the damaged state of the building, further speculation as to its original appearance is vain, but the fact that the two pillars were some 9 metres apart indicates that the platform must have been without a roof.

The platforms at Sesebi and Amada would appear to belong to buildings of the same general type, but possibly differ in points of detail. There is no suggestion that they, also, were "Sunshades"; all that the evidence permits us to say is that they were small solar shrines. It is surely no coincidence that the sun-temple at Meroe was a building very similar to these, but on

<sup>&</sup>lt;sup>1</sup> Davies, I, Pl. XXXI (= our Fig. 16). Borchardt, op. cit. 19, points out that there are indications of a similar building in a similar position in the magazines of the Ramesseum.

<sup>&</sup>lt;sup>2</sup> See below, p. 209.

<sup>&</sup>lt;sup>3</sup> Davies, I, Pls. VI, XVIII (= our Fig. 14), XXV; II, Pl. XLI; III, Pl. XIII; VI, Pl. XVII.

<sup>&</sup>lt;sup>4</sup> JEA. XXIII. 147, 148 and Pls. XIV and XVI, Fig. 3. The building will be published in full in the Society's memoir on the excavations at Sesebi. It should be pointed out that the published plan makes no distinction between the different periods in the construction of the building. Only the square platform and the ramp to the west are the work of Akhenaten, all the work on the east and the enclosure wall are of a later period.

<sup>&</sup>lt;sup>5</sup> The word "columns" is used somewhat loosely here to designate both columns and pillars, fragments of both being found.

<sup>&</sup>lt;sup>6</sup> Borchardt, op. cit. 99, 100; Pl. XXII bottom; and the literature there quoted.

a much larger scale. Although it is evident that these buildings were not exactly the same as those which we suggest were the Amarna "Sunshades", the two types of building were clearly related in form.

Although the name  $\check{S}wt$ -R' has not been found after the Twentieth Dynasty, it may not be without significance to recall that the Ptolemaic kiosks, which were beside the sacred lakes, or were otherwise attached to the temples, or were on the roofs of the temples, were all, as the Ptolemaic determinatives and surviving examples show, buildings fundamentally the same as the suggested Amarna Sunshades, though again somewhat modified. Such buildings were usually called  $m_i r^2$  or h(i)yt, and a text at Edfu indicates that  $m_i r$  was a synonym of the kiosk that originally stood on the roof of the temple. It seems not impossible that further research may show that these buildings are the descendants of the Sunshades.

The striking feature of the Amarna Sunshades is the very large proportion that are explicitly linked with the royal ladies. One of the functions of the Amarna Sunshades may have been, therefore, to act as private chapels for the Queen-Mother, the Queen, and her daughters. But it is evident that if our identification of the Sunshade of Meritaten be correct, and if it be typical of the other Sunshades, these buildings were not true sun-temples, since the Sunshade of Meritaten is orientated south to north, and hence in this respect the Sunshades are to be differentiated from the Aten-kiosks at Sesebi and Amada.

It is impossible as yet to reach any final conclusions as to the nature and purpose of the Sunshades. The following conclusions are advanced merely in order to summarize the main results of our study, but with a clear realization that they are hypothetical in the extreme and far from being proved.

We may conclude that there seems to be reason to believe that, originally at least, there was some connexion between the Sunshade and the King, who may have received his mystical powers therein (see above, p. 203). This royal connexion certainly existed in the Amarna period, when the Sunshades are specially linked with the royal ladies. It is not impossible that throughout the Eighteenth Dynasty the Sunshades may have acted, also, as the resting-places of sacred images and barks during religious processions and festivals. There is no evidence as to the function of the Sunshades in Ramesside times, but perhaps there was no change. Finally, it must be a task for future research to discover whether there is any link between the Sunshades and the Ptolemaic kiosks; there appears to be a certain superficial resemblance and the part played by the roof-kiosks at the accession of the King is strongly reminiscent of one of the probable purposes of the Sunshades.

# E. THE HALL OF FOREIGN TRIBUTE

If the view expressed elsewhere in this volume (above, pp. 22-5) that the Hall of Foreign Tribute is to be equated with the building, or the complex of buildings, astride the north temenos wall of the Great Temple be correct, it would be only proper to discuss its location and name in this Appendix. I must confess that I am not impressed by this identification, and

<sup>&</sup>lt;sup>1</sup> Garstang, Meroe, the City of the Ethiopians, pp. 25 ff., Pl. XXVII.

<sup>&</sup>lt;sup>2</sup> Cf. Chassinat, Revue de l'Égypte ancienne, I. 298 ff.

<sup>&</sup>lt;sup>3</sup> The roof-kiosk at Dendera bears this name (Dümichen, Baugeschichte, Pl. XXXI), though the special name of this building, in both temples, was St-hb-tpy (e.g. Chassinat, Le Temple d'Edfou, VII. 14, 4).

<sup>&</sup>lt;sup>4</sup> Rochemonteix-Chassinat, Le Temple d'Edfou, I. 539, 2.

it is hard to reconcile the plan of the buildings excavated with the Hall of Foreign Tribute as shown in the tomb reliefs.

The Amarna tombs preserve two versions of the scene of the reception of foreign tribute in the tombs of Ḥuya¹ and Meryrē II.² Although there are certain differences between the two versions, both are in agreement that the essential and central feature was a single and independent building, a kiosk erected on a low pedestal. In the tomb of Ḥuya a number of small altars and small, indeterminate buildings, probably of a temporary nature, are shown in the neighbourhood of the central kiosk. All the subsidiary constructions are missing from the reliefs of Meryrē II and therefore, possibly, are non-essential. They are certainly quite independent of the central building, and the reliefs give no hint of such a complicated layout as is revealed by the supposed Hall of Foreign Tribute.

The kiosk, which in both versions is the centre of the scene, consists of a low pedestal, approached in the middle of each side by a ramp.<sup>3</sup> On this pedestal twelve columns, four on each side, support a roof and have between them a low balustrade or screen wall.<sup>4</sup> It is a typical Amarna kiosk and at the same time is broadly similar, except for the roof, to what has been suggested above was the basic type of Sunshade-temple at Amarna.

If the Hall of Foreign Tribute is not to be identified with any building in the central part of Akhetaten, where is it to be sought? Davies<sup>8</sup> long ago advanced the suggestion that it was to be identified with what are now known as the Desert Altars.<sup>9</sup> The term "Desert Altars" is admittedly unfortunate and misleading, for these buildings are certainly something more than mere altars. It is not absolutely impossible that the Desert Altars should be the Hall of Foreign Tribute; the site is certainly well suited for a pageant such as the reception of foreign tribute,

<sup>&</sup>lt;sup>1</sup> Davies, III, Pls. XIII, XIV (= our Fig. 4 on p. 24).

<sup>&</sup>lt;sup>2</sup> Ibid. II, Pls. XXXVII, XXXVIII, with revised copy of the main text on Pl. XXIX.

<sup>&</sup>lt;sup>3</sup> In Ḥuya only three ramps are shown, the fourth, not unnaturally, being out of sight; in Meryrec II, on the other hand, only two ramps are depicted.

<sup>&</sup>lt;sup>4</sup> In Meryre II the balustrade is missing, presumably because, unlike the relief of Ḥuya, the King is shown on his throne and his figure would have been partially obscured if the artist had drawn the balustrade.

<sup>&</sup>lt;sup>5</sup> Ibid. III, Pl. XIII.

<sup>6</sup> Ibid. II, Pl. XXIX.

<sup>&</sup>lt;sup>7</sup> But note that the titulary contains some additional and undecipherable words. Davies suggests that these words on the left may have been "in the great desert of Akhetaten" (*ibid.* II. 39).

<sup>&</sup>lt;sup>8</sup> Ibid, II. 6.

<sup>9</sup> COA. II. 101, 102, Pl. XXVI.

and suits the term "in the great desert of Akhetaten", if Davies's interpretation of the damaged words in Meryre II be correct. On the other hand, the present layout of the Desert Altars does not exactly agree with the plan that one can deduce from the reliefs. It may be said, perhaps, that the site underwent considerable modification after the reception of tribute in year 12, but in the present state of our knowledge the wiser course is to admit that while the Desert Altars may provide a possible site for the Hall of Foreign Tribute, there is no evidence to permit an exact identification with any known building.

A further possibility which must not be overlooked is that the Hall of Foreign Tribute, like the building erected for the ceremony at the Boundary Stelae, was only a temporary structure which was possibly dismantled completely at the end of the ceremony. This would also provide an explanation for the fact that the Hall of Foreign Tribute was not given a specific name and was only mentioned in general and conventional terms. Whatever may be the solution of the problem, it appears somewhat improbable that the building formed part of the central portion of the city.

#### F. OTHER OFFICIAL BUILDINGS

Lastly, there remain a few other buildings whose names, identification, and position have, for the most part, been discussed elsewhere in this volume.

# (a) Buildings named and definitely identified

- 1. The Bureau for the Correspondence of Pharaoh L.P.H.: identification with Q. 42. 21 (the Records Office) is assured by the discovery of stamped bricks (Pl. LXXXIII. v with p. 150); for the excavation see pp. 113 ff.
- 2. The House of Life: identified with Q. 42. 19 and 20 by the discovery of stamped bricks (Pl. LXXXIII. vi with p. 150); excavation, p. 115; discussion of its nature, p. 150.
- 3. [The Storehouse] of Service of the Aten: identified by stamped bricks from P. 43. 1 and 2 (the Priests' Quarters), see Pl. LXXXIII. VII with p. 150; other bricks (Pl. LXXXIII. I) definitely link this with the Royal Estate; excavation, pp. 100, 101.

# (b) Buildings identified but whose ancient name is not known

- 1. The Military Quarters: identified with R. 42. 8 and 9; for the identification and excavation see pp. 131, 132.
- 2. The Police Barracks: identified with R. 42. 10; for identification and excavation see pp. 132-5.
- 3. Panehsy's Official Residence: identification and excavation, p. 26 (cf. Pl. LX. 4 with p. 189); for inscribed bricks see Pl. LXXXIII. IV with p. 150.
- 4. The Office of Works: it has been suggested above (p. 181) that among the Government Offices to the east of the Royal Estate was an Office of Works of which that section concerned with the affairs of the Royal Estate was the "Eastern Block" (p. 116) and that devoted to the Great Palace was the "Houses to the East" and the "Houses to the South-East" (p. 117).

### (c) Buildings named but of uncertain position

The Amarna inscriptions contain numerous references to "treasuries", "houses", "harems",

"storehouses", and other buildings of an obviously official nature without any further indication of their location. Since there is no clue to their position nor any proof that any or all of them were in the Central City, they will not be enumerated or discussed here.

However, it has been stated above (p. 106) that the names of Q. 41. 9 and 11 may have been  $\check{S}n^c n Wr$ - $\underline{d}f_{i}w$  and  $\check{S}n^c n K_{i}$ -n-cnh- $R^c$ . This remark was based on my preliminary observation in JEA. XXI. 139, which in turn was made on the strength of the evidence of the 1932–3 season and before the results of 1936–7 were known or all the material analysed and digested. It is now necessary to modify these remarks.

It is evident that identifications based solely on the evidence of hieratic dockets must be of very uncertain value, for not only can sherds be scattered easily, but jars stored in any particular place can be issued to almost any building in the city. Nevertheless, the facts are significant. The vast majority of the dockets found in the groups of magazines between the Royal Estate and the Great Temple are of meat or meat products, and there is reason to believe, therefore, that the preparation and storage of various kinds of meat were some of the chief activities of the buildings in this area. In this same area were found most of the dockets that mention  $\check{S}n^c n Wr-\underline{d}f_{\bar{s}W}$  and  $\check{S}n^c n K_{\bar{s}}-n-cnh-R^c$ . In the Magazines south of the Temple only  $\check{S}n^c n K_{\bar{s}}-n-cnh-R^c$  was found, but in Q. 41. 9 and 11 examples of this name were outnumbered by more than two to one by  $\check{S}n^c n Wr-\underline{d}f_{\bar{s}W}$ .

The docket published on Pl. LXXXIV. 9 seems to indicate that there was a separate building called  $K_{i-n-r}n_{i-r}n_{i-r}$ . On the analogy of this it may be argued that  $W_{r-d_i}n_{i-r}$  was also the name of another building or block. Assuming, therefore, the existence of these two blocks, we can examine them more closely.

In K3-n-rnh-R' there was certainly an ergastulum (šnc), see Pls. XCI. 179, 181; XCII. 203-6; XCIV. 238; and P., Pls. XXIII. 57; XXIV. 87, and an shyt (see above, p. 171). If our interpretation of Pl. LXXXIV. 9 be correct (see above, p. 172), the still-room (shyt) of the House of the Aten was also a part of this block, and with it are in all probability to be linked Pls. XCI. 185; XCII. 194, 199; XCIII. 228; XCIV. 259, and XCV. 262 of Pr Itn and Pls. XCI. 180 and XCII. 211 (?) of Pr cnh-Itn.

In Wr-df; w the only certain subsection is an ergastulum (Pls. XCI. 182; XCII. 191, 212; XCIII. 214; and XCIV. 239, 240).

There still remain the *jhyt Pr-c*; (Pls. XCII. 192, 202; XCIII. 223, 234), *šnc Pr-c*; (Pls. XCIII. 233; XCIV. 241; XCV. 264) and *jhyt ts hmt-nsw* (Pl. XCIV. 245). The fact that all these are closely linked with the meat series is perhaps a hint that they also were situated in the same portion of the city. It will be noticed that just as archaeological considerations have led us to treat this area in two sections, the "Magazines south of the Temple" and the "Magazines between the Royal Estate and the Great Temple", so the internal evidence of the dockets and the circumstances of their finding have led us to deduce the existence of two blocks Ki-n-cnh-R' and Wr-dfiw, of which the former appears to correspond to the Magazines south of the Temple, while the latter includes Q. 41. 9 and 11 and may be assumed to embrace the "Magazines between the Royal Estate and the Great Temple". As might be expected, certain parts of

<sup>&</sup>lt;sup>1</sup> The location of these buildings on Pl. I is not quite accurate, for that plate was drawn many years before these remarks were drafted and revised. A more accurate indication of their probable position is given in my plan in *The Town Planning Review*, XX, Fig. 15.

 $K_{i-n-r}n_{i-R}r$  were certainly attached to the Great Temple, and it seems a fair assumption that all of this block was composed of storerooms or workrooms dependent on the Temple. If this be so, may not  $Wr-df_{i}w$  similarly be attached to the Royal Estate? Thus one may suggest that the  $ihyt Pr-r_{i}$ ,  $inc Pr-r_{i}$ , and ihyt tr hmt-nsw, as well as the  $inc n Wr-df_{i}w$ , were all parts of  $Wr-df_{i}w$ , and formed parts of the "Magazines between the Royal Estate and the Great Temple" which cannot be identified more closely.

It cannot be stressed too strongly that these are only suggestions with no very strong foundation. This is inevitable from the nature of the evidence, but in default of decisive facts it is legitimate to make these inferences and suggestions and to hope that the evidence that will settle the matter may yet be found.

### APPENDIX B

### REGISTER OF INSCRIPTIONS

### (a) Impressions on Jar Stoppings (Pls. LXXXI-LXXXIII)

The figures in brackets after the register numbers of the 1936–7 season indicate the number of each type of sealing found. For the types of sealing, in the last column, see Pl. LXXXIII and p. 144. No. 96, from the North Palace (JEA. XVIII. 143, 144) (opposite the north expedition house), has been included in the present series by error.

Number	Season	Register Number	Provenance	Type
1	36/7	73 (2)	R. 42. 9	
2	31/2	135	Bridge, West	A
3	31/2	96, 97, 115, 116	Q. 41. 7	A
	*	130	P. 42. 2	A
4	36/7	63 (2)	Temple Dump, South	
5	36/7	66	Temple Dump, South	
6	36/7	82	Magazines south of Temple	
7	36/7	81	Magazines south of Temple	
8	33/4	43	S. 39. 1	A?
9	32/3	48	Temple, outside south wall	A
10	33/4	72	R. 42. 10	
11	32/3	34	Temple, outside south wall	A
12	36/7	22 (2)	Temple Dump, South	
13	36/7	45	Temple Dump, South	
14	36/7	70 (2)	Temple Dump, South	
15	31/2	131, 134	Bridge, West	A
16	32/3	40, 52	Temple, outside south wall	A
17	36/7	78	Temple Dump, South	
18	36/7	36 (2)	Temple Dump, South	
19	31/2	50	Small Temple	В
20	31/2	42, 47	Small Temple	A
21	36/7	79	Magazines south of Temple	
22	36/7	16	Temple Dump, South (2)	
			R. 42. 9 (1)	
23	36/7	55	Temple Dump, South (8)	
			R. 42. 9 (1)	
24	31/2	118	Bridge, West	A
25	31/2	136	6 P. 42. 2	
26	36/7	43 (2)	Temple Dump, South	
27	36/7	28	Temple Dump, South	
28	31/2	41	Small Temple	A

Number	Season	Register Number	Provenance	Type
29	31/2	38	Small Temple	A
		73	P. 42. 2	A
30	31/2	57-63, 65	Small Temple	A
	•	68, 70, 71	P. 42. 2	A
31	31/2	37	Small Temple	A
		69	P. 42. 2	A
32	31/2	74	P. 42. 2	
33	31/2	75	P. 42. 1	A
34	31/2	46	Small Temple	В
35	34/5	3	Great Palace, North Harem	В
- 36	36/7	76	Magazines south of Temple	
1000000	F 021900000000000000000000000000000000000	75	Panehsy	
37	26/7	NA 19655	Great Temple, south side	 A
	32/3	16		
38	35/6	8	Great Palace, Central Halls	A
39	36/7	17	Temple Dump, South (3)	• •
F			R. 42. 9 (7)	••
40	32/3	7	Great Temple, south-west corner	A
41	36/7	13	Temple Dump, South	• •
42	32/3	14	Great Temple, entrance	A
	36/7	1 (8)	Temple Dump, South	
43	36/7	50	Temple Dump, South	• • .
44	32/3	24, 30	Great Temple, south wall	A
45	36/7	10 (4)	Temple Dump, South	
46	33/4	47	S. 39. 1	
- 47	36/7	29	Temple Dump, South	
48	36/7	20 (4)	Temple Dump, South	
49	32/3	53	Great Temple, entrance	A
50	32/3	25	Great Temple, south wall	A
51	36/7	84	Temple Dump, South (3)	
01	30/1	01	Magazines south of Temple (1)	
<b>E</b> 0	33/4	36	S. 39. 1	A
52		244.435	Q. 41. 7	A
53	31/2	100, 101, 109, 114		A
	32/3	56	Q. 41. 11	
54	31/2	104, 105	Q. 41. 7	A
- 55	31/2	91	P. 42. 1	A
	22.00	107, 110	Q. 41. 7	A
	32/3	54	Q. 41. 9	A
56	32/3	58	Q. 41. 1	A
57	33/4	51	Q. 42. 21	A
58	31/2	94	P. 42. 1	A
11.1		117	Q. 41. 7	A
59	31/2	99	Q. 41. 7	A
60	36/7	7	Temple Dump, South	
61	32/3	28, 29, 31	Temple Dump, South	A
62	26/7	76	Great Temple, Sanctuary	
63	36/7	40 (2)	Temple Dump, South	
64			A	
65			A	
66			1.2	
67			A	
68	32/3	5	Great Temple, entrance	A
00		62 (2)	Temple Dump, South	
69	36/7 36/7	67 (2)	Temple Dump, South	;

Number	Season	Register Number	Provenance	Type
70	33/4	4, 23	S. 39. 1	A
71	32/3	6	Great Temple, entrance	A
72	33/4	78	R. 42. 10	В
73	26/7	30	Great Temple, Sanctuary	**
74	33/4	54	Q. 42. 32	A
75	36/7	86	Magazines south of Temple	
76	36/7	48 (5)	Temple Dump, South	
77	35/6	4	Great Palace, south-east courts	A
78	32/3	33	Temple Dump, South	A
79	36/7	54 (3)	Temple Dump, South	
80	36/7	53	Temple Dump, South (1)	
15.52			Magazines south of Temple (1)	
81	33/4	1	S. 39. 1	
82	36/7	47 (2)	Temple Dump, South	
83	32/3	39	Temple Dump, South	A
84	36/7	3	Temple Dump, South (5)	
4284			Magazines south of Temple (1)	
85	36/7	11 (6)	Temple Dump, South	
86	36/7	83	Temple Dump, South	
87	35/6	5	Bridge, East	A
88	32/3	38	Great Temple, south wall	A
89	32/3	36	Great Temple, south wall	A
90	33/4	45	S. 39. 1	A
91	36/7		Temple Magazines	
92	36/7	72	R. 42. 9	
93	36/7	85	Magazines south of Temple	
94	36/7	60	Temple Dump, South	
95	32/3	46	Temple Dump, South	A.
96	31/2	23	Northern Palace	A
97	31/2	40	Small Temple	A
98	32/3	44	Great Temple, south wall	A
99	36/7	6 (3)	Temple Dump, South	
100	0.0550000000000000000000000000000000000	5	Temple Dump, South (3)	••
100	36/7	1	R. 42. 9 (1)	• •
101	36/7	30 (3)	Temple Dump, South	••
102	100 Table 100 Ta	39 (3)	Temple Dump, South	••
102	36/7	68 (2)		••
103	36/7	31	Temple Dump, South	
104	33/4	115 (6)	R. 42. 10	A
105	36/7	67	Temple Dump, South	
105	32/3	59	Q. 41. 1	A
106	26/7	· 87	Panehsy	•
107	31/2	76	P. 42. 2	A
108	35/6	3	Bridge, East	В
109	31/2	108	Q. 41. 14	A
110	33/4	27	Q. 40. 3	
	35/6	1	Central Halls	В
111	33/4	16	Arab Tomb	В
112	33/4	82, 83	R. 42. 10	
113	33/4	80, 81	R. 42. 10	В
25270	34/5	2	Great Palace, southern dump	В
114	31/2	45	Small Temple, southern dump	В
115	36/7	74 (12)	Palace, Servants' Quarters	••
116	32/3	4, 8, 9	Great Temple, south-west corner	В

Number	Season	Register Number	Provenance	Type
117	34/5	1	Great Palace, southern dump	A
118	35/6	6	Great Palace, south-west courts	C
119	36/7	19 (3)	Temple Dump, South	
120	36/7	49	Temple Dump, South (4)	
	19300		Magazines south of Temple (2)	
121	36/7	15	Great Palace, Servants' Quarters	
122	31/2	66	P. 43. 1	В
123	31/2	51	Small Temple	В
124	36/7	56 (2)	Temple Dump, South	
125	36/7	9	Temple Dump, South	
126	33/4	9, 10, 39	S. 39. 1	
127	32/3	23	Temple Dump, South	A
128	33/4	24	Arab Tomb	
129	26/7	72	Great Temple, Sanctuary	
130	33/4	8	8. 39. 1	
131	33/4	57	Q. 42. 32	A
132	33/4	75–7	R. 42. 10	A
133	33/4	87	R. 42. 10	
134	33/4	15, 17-22	Arab Tomb	A
135	31/2	129	P. 43. 1	A
136	33/4	52	Q. 42. 32	
137	36/7	30	Temple Magazines	
138	36/7	77	Magazines south of Temple	
139	36/7	75	Magazines south of Temple	
140	36/7	51	Temple Dump, South	
141	36/7	65	R. 42. 9	
142	31/2	121	P. 42. 2	A
143	36/7	38	Temple Dump, South	
144	36/7	23 (6)	Temple Dump, South	
145	33/4	3	S. 39. 1	
	70	23	Great Temple, Sanctuary	
146	32/3	41	Great Temple, south wall	A
147	31/2	123-5	P. 42. 2	A
148	32/3	47	Great Temple, south wall	A
149	36/7	42 (2)	Temple Dump, South	
150	36/7	59	Temple Dump, South	
151	36/7	8	Temple Dump, South	
152	36/7	41	Temple Dump, South	
153	36/7	80 (2)	Magazines south of Temple	
154	36/7	32 (2)	Temple Dump, South	
155	33/4	56	Q. 42. 19	В
156	36/7	25	Temple Dump, South	

# (b) Impressions on Mud Bricks (Pl. LXXXIII. I-VIII)

I. P. 42. 1; P. 42. 2; P. 43. 1; Small Temple; Q. 42. 29.

V. Q. 42. 21.

II. Q. 42. 25 (a number); R. 42. 6 (one only).

VI. Q. 42. 19 and 20.

III. Coronation Hall.

VII. P. 43. 1 and 2.

IV. Panehsy's house.

VIII. Q. 42. 19.

# (c) Hieratic Ostraca, Dockets, and Gypsum Specimens (Pls. LXXXIV-XCVIII)

N.B. Nos. 30, 47, 54, 75, 110, 174, 298, 300 from the North, or Nefertiti's, Palace (*JEA*. XVIII. 143, 144) and 299 from O. 47. 16 a are included in the plates by error and were not found in the Central City. 107 from the North Suburb and previously published in *COA*. II, Pl. LVII. 21 is inserted to complete the record of the "Sunshades". Where the provenance is indicated by a number without any indication of a square (e.g. No. 28 from 21) the reference is to the Scribes' Houses (pp. 122 ff).

No.	Register No.	Provenance	No.	Register No.	Provenance
1	35/214	Palace: Central Halls	41	35/120	Palace: South Court
2	35/3	Palace: Courts south of the	42	33/212	R. 42. 7
	30	Broad Hall	43	33/85	Q. 42. 11
3	33/132	Q. 42. 7	44	33/223	R. 42. 7
4	36/170	R. 42. 9	45	33/430	R. 42. 10
5	36/154	R. 42. 9	46	35/173	Bridge, West
6	36/119	R. 42. 9	47	31/23	North Palace
7	33/62	Q. 42. 23	48	36/297	R. 42. 9
8	33/101	Q. 42. 8	49	31/69	Small Temple
9	33/420	R. 42. 10	50	33/267	R. 42. 7
10	36/120	S. 40. 1	51	36/75	Palace: Servants' Quarters
11	33/349 a, b	R. 42. 8	52	33/206	R. 42. 7
12	35/43	Palace: Central Halls	53	36/21	Approach to Temple Magazine
13	32/83	Q. 41. 9	54	31/25	North Palace
14	33/369	R. 42. 8	55	32/222	Q. 41. 6
15	26/61 [B.M. 58869]	Great Temple: Sanctuary	56	35/191	Bridge, East
16	36/65	Temple Dump, South	57	33/436	R. 42. 10
17	36/25	Approach to Temple Magazines	58	33/39	Q. 42. 29
18	35/156	Bridge, West	59	33/355	R. 42. 10
19	34/38	Palace: Weben-Aten	60	35/221	Palace: Central Halls
20	33/43	S. 39. 1	61	35/153	Palace: South Court
21	35/143	Palace: South Courts	62	33/317	14
22	32/51	P. 41. 3	63	33/196	R. 42. 7
23	36/272	R. 42. 9	64	33/108	Q. 42. 9
24	33/204	R. 42. 7	65	32/157	Q. 41. 11
25	36/288	R. 42. 9	66	35/194	Bridge, East
26	33/284	Q. 42. 30	67	33/320	54-7
27	31/118	Q. 41. 14	68	33/318	22
28	33/290	21	69	33/330 + 331	70-4
29	36/208	R. 42. 9	70	36/201	R. 42. 9
30	31/29	North Palace	71	36/147	R. 42. 9
31	36/277	R. 42. 9	72	36/247	R. 42. 9
32	33/249	R. 42. 6	73	35/34	Palace: Central Halls
33	34/25	Palace: Servants' Quarters	74	34/14	Palace: rubbish-pits outside
34	31/114	Q. 41. 7			south wall
35	36/76	Palace: Servants' Quarters	75	31/40	North Palace
36	35/46	Palace: Central Halls	76	35/213	Palace: Central Halls
37	33/220 + 248	R. 42. 7	77	34/33	Palace: rubbish-pits outside
38	35/141	Palace: Central Halls			south wall
39	33/209	R. 42. 7	78	36/56	Temple Dump, South
40	33/30	Q. 40. 4	79	36/159	R. 42. 9

No.	Register No.	Provenance	No.	Register No.	Provenance
80	33/27	Q. 40. 4	132	33/403	R. 42. 10
81	36/192	R. 42. 9	133	36/179	R. 42. 9
82	36/207	R. 42. 9	134	36/191	R. 42. 9
83	33/194	R. 42. 7		35/124	Palace: South Court
84	33/419	R. 42. 10	136	33/281	R. 42. 6
85	33/428	R. 42. 10	137	36/286	R. 42. 9
86	32/23	Temple Magazines	138	32/104	Q. 41. 9
87	36/254	R. 42. 9	139	31/128	Q. 41. 14
88	36/48	Temple Dump, South	140	33/107	Q. 42. 18
89	31/132	Bridge, West	141	33/341	R. 42. 8
90	26/31	Great Temple: Sanctuary	142	36/203	R. 42. 9
91	32/224	Q. 41. 6	143	26/787 [B.M. 58851]	?
92	36/150	R. 42. 9	144	33/28 + 29	Q. 40. 4
93	36/186	R. 42. 9	145	35/93	Palace: Central Halls
94	35/212	Palace: Central Halls	146	35/121	Palace: Central Halls
95	36/275	R. 42. 9	147	33/356	R. 42. 8
96	33/264	R. 42. 7	148	33/298	10–13
97	36/202	R. 42. 9	149	33/170	R. 42. 1
98	35/167	Bridge, West	150	33/49	S. 39. 1
99	36/242	R. 42. 9	151	33/325	70-4
100	36/160	R. 42. 9	152	33/285 + 306	Q. 42. 31
101	36/161	R. 42. 9	153	33/123	Q. 42. 21
102	35/197	Bridge, East	154	33/34	Q. 42. 1
103	36/259	Magazines south of the Temple	155	35/17	Palace: Central Halls
104	38/81	Palace: Central Halls	156	33/429	R. 42. 10
105	35/204	Palace: Central Halls	157	36/8	Palace: Servants' Quarters
106	32/108	Q. 41. 9	158	36/244	R. 42. 9
107	26/162 [B.M. 58870]	North Suburb [= COA. II, Pl.	159	36/278	R. 42. 9
		LVII. 21]	160	32/17	Temple Dump, South
108	32/232	R. 41. 1	161	33/4	Arab Tomb
109	36/95	Temple Dump, South	162	33/35	Q. 42. 1
110	31/11	North Palace	163	32/45	P. 41. 2
111	32/30	Temple Magazines	164	32/246	Q. 41. 5
112	33/297	1	165	26/— [B.M. 58872]	?
113	33/372	R. 42. 8	166	35/163	Bridge, West
114	36/252	R. 42. 9	167	32/2	Temple, South Side
115	36/55	R. 42. 9	168	33/287	1
116	36/276	R. 42. 9	169	36/125	R. 42. 9
117	33/120	Q. 42. 9	170	33/352	R. 42. 8
118	32/226	R. 41. 6	171	35/104	Palace: Central Halls
119	33/254	Q. 42. 25	172	32/57	P. 41. 3
120	31/102	P. 42. 2	173	36/89	Temple Dump, South
121	33/67	Q. 42. 24	174	31/22	North Palace
122	33/353	R. 42. 8	175	32/226 A	R. 41. 6
123	36/273	R. 42. 9	176	35/67	Palace: Central Halls
124	33/13	Q. 40. 3	177	32/18	Temple: South Wall
125	33/328	44	178	35/211	Palace: Central Halls
126	33/130	Q. 42. 6	179	32/89	Q. 41. 9
127	31/119	Q. 41. 14	180	26/— [B.M. 58884]	?
128	33/55	Q. 42. 32	181	32/91	Q. 41. 9
129	33/84	Q. 42. 33	182	32/102	Q. 41. 9
130	31/92	P. 43. 1	183	32/228	R. 41. 6
131	36/165+166	R. 42. 9	184	32/85	Q. 41. 9
F		E THE THEORY WIND SCHOOL SERVICES		421	at a second

No.	Register No.	Provenance	No.	Register No.	Provenance
185	26/	?	238	32/221	P. 41. 2
186	36/153	R. 42. 9	239	32/161	Q. 41. 11
187	32/100	Q. 41. 9	240	32/90	Q. 41. 9
188	32/60	P. 41. 3	241	35/50	Bridge, East
189	33/302	39	242	32/162+163	Q. 41. 11
190	36/124 + 126	R. 42. 9	243	32/88	Q. 41. 9
191	35/175	Bridge, West	244	32/238	Q. 41. 8
192	32/93	Q. 41. 9	245	33/363	10-13
193	32/107	Q. 41. 9	246	35/106	Palace: Central Halls
194	32/171	Q. 41. 11	247	35/140	Palace: Rooms flanking Central
195	32/170	Q. 41. 11			Halls
196	32/168	Q. 41. 11	248	32/160	Q. 41. 11
197	32/39	P. 41. 2	249	35/59	Palace: Central Halls
198	32/167	Q. 41. 11	250	36/29	Temple Dump, South
199	32/164	Q. 41. 11	251	36/188	R. 42. 9
200	32/86	Q. 41. 9	252	33/221	R. 42. 7
201	32/165	Q. 41. 11	253	32/176	Q. 41. 11
202	32/98	Q. 41. 9	254	32/237	Q. 41. 8
203	32/50	P. 41. 3	255	33/73	Q. 42. 8
204	36/225	Magazines south of the Temple	256	33/176	R. 42. 3
205	36/234	Magazines south of the Temple	257	35/210	Palace: Central Halls
206	36/224	Magazines south of the Temple	258	32/106+122	Q. 41. 9
207	36/222	Magazines south of the Temple	259	35/115	Palace: Central Halls
208	32/31+33	Temple Magazines	260	35/206	Palace: Central Halls
209	32/59	P. 41. 3	261	36/24	Approach to Temple Magazines
210	33/10	Q. 41. 13	262	33/3	Arab Tomb
211	33/361	10–13	263	33/11	Q. 41. 13
212	33/362	10–13	264	35/42	Palace: Central Halls
213	31/97	P. 42. 1	265	35/58	Palace: Central Halls
214	32/154	Q. 41. 11	266	33/263	2–3
215	32/101	Q. 41. 9	267	35/125	Palace: South Court
216	32/111	Q. 41. 9	268	35/15	Palace: Central Halls
217	36/—	Magazines south of the Temple	269	32/99	Q. 41. 9
218	33/333	70-4	270	33/155	Q. 42. 3
219	32/231	R. 41. 1	271	36/78	Palace: Servants' Quarters
220	32/62	P. 41. 3	272	35/157	Bridge, West
221	32/54	P. 41. 3	273	35/16	Palace: Central Halls
222	32/58	P. 41. 3	274	26/693 [B.M. 58854]	?
223	32/153	Q. 41. 11	275	33/337	58-65
224	33/442	R. 42. 10	276	35/84	Palace: Central Halls
225	32/110	Q. 41. 9	277	32/242	Q. 41. 4
226	32/173	Q. 41. 11	278	36/228	Magazines south of the Temple
227	32/158	Q. 41. 11	279	32/196	Q. 41. 11
228	32/92	Q. 41. 9	280	36/53	Temple Dump, South
229	32/172	Q. 41. 11	281	36/66	Temple Dump, South
230	35/14	Palace: Central Halls	282	26/363 [B.M. 58863]	?
231	32/87	Q. 41. 9	283	36/122	R. 42. 9
232	,	Q. 41. 11	284	32/225	R. 41. 6
233		Palace: Servants' Quarters	285	33/26	Q. 40. 3
234	A STATE OF THE STA	Palace: Servants' Quarters	286	33/310	36
235	32/55	P. 41. 3	287	31/78	Small Temple
236	36/121	R. 42. 9	288	31/145	Bridge, West
237	33/399+401+402	R. 42. 10	289	36/311	R. 43. 1

No.	Register No.	Provenance	No.	Register No.	Provenance
290	36/294	R. 42. 9	313	35/150	Palace: Rooms flanking Centra
291	35/187	Palace: South Court			Halls
292	33/247	R. 42. 6	314	36/19	Approach to Temple Magazines
293	35/100	Palace: Central Halls	315	36/111	Temple Dump, South
294	35/82	Palace: Central Halls	316	26/49	Panehsy's house
295	35/90	Palace: Central Halls	317	35/41	Palace: Central Halls
296	36/79	Palace: Servants' Quarters	318	35/30	Palace: Central Halls
297	31/72	P. 43. 2	319	35/82	Q. 42. 33
298	31/17	North Palace	320	33/308	1
299	32/9	O. 47. 16 A	321	35/132	Palace: Coronation Hall
300	31/30	North Palace	322	33/437	R. 42. 10
301	31/104	P. 42. 1	323	36/185	R. 42. 9
302	35/108	Palace: Central Halls	324	36/148	R. 42. 9
303	33/385	10–13	325	36/54	Temple Dump, South
304	32/82	Q. 41. 9	326	36/110	S. 40. 1
305	36/137	R. 42. 9	327	26/— [B.M. 58864]	?
306	32/41	P. 41. 2	328	26/44 [B.M. 58859]	Panehsy's house
307	26/48	Panehsy's house	329	36/304	Palace: Servants' Quarters
308	32/156	Q. 41. 11	330	36/305	Palace: Servants' Quarters
309	35/218	Palace: Central Halls	331	33/241	Q. 42. 23
310	35/8	Palace: Central Halls	332	31/184	P. 42. 1
311	35/73	Palace: Central Halls	333	33/242	Q. 42. 23
312	35/208	Palace: Central Halls	334	31/87	P. 42. 1
			335	33/135	Q. 42. 7

# (d) Impressions of Small Seals (Pl. C)

1. R. 42. 10	14. R. 42. 10	27. Palace, outside south wall
2. R. 42. 10	15. R. 42. 10	28. 45
3. P. 43. 1	16. R. 42. 10	29. R. 42. 10
4. Magazines south of Temple	17. R. 42. 9	30. P. 42. 2
5. R. 42. 10	18. R. 42. 10	31. Bridge, West
6. Q. 42. 7	19. 40	32. Bridge, West
7. Surface near Temple Magazines	20. Bridge, East	33. 17, 18
8. P. 43. 1	21. Q. 40. 4	34. P. 43. 1
9. R. 42. 10	22. P. 41. 2	35. Bridge, East
10. R. 42. 10	23. P. 42. 2	36. Q. 42. 11
11. R. 42. 10	24. 23	37. Q. 40. 3
12. R. 42. 10	25. P. 43. 1	38. R. 42. 10
13. Q. 42. 20	26. Q. 42. 11	

# (e) Hieroglyphic Inscriptions on Fragments of Stone (Pls. CI-CIII)

No.	Season	Register No.	Provenance	Material
1	35/6	C. 4	Palace: Broad Hall	Limestone (column)
2	34/5	D. 1	" Weben-Aten	Sandstone
3	34/5	D. 8	,, ,,	,,
4	35/6	C. 2	,, Central Halls	Limestone
5	35/6		" Broad Hall	Sandstone (stela)
6	34/5	S. 31	"	Limestone (column)
7	34/5	D.5	" Weben-Aten	Sandstone

No.	Season	Register No.	Provenance	Material
8	35/6	C. 5	Palace: Broad Hall	Limestone (column)
9	34/5	S. 37	,, Weben-Aten	Sandstone
10	34/5	S. 28	" "	,,
11	35/6	C. 1	" Broad Hall	"
12	34/5	S. 17	" North Harem	Limestone (column)
13	34/5	S. 33	,, Weben-Aten	,, ,,
14	34/5	S. 34	"	,, ,,
15	34/5	D. 7	,, ,,	,, ,,
16	34/5	S. 24	,, ,,	,, ,,
17	35/6	C. 3	" Broad Hall	,, ,,
18	34/5	S. 38	" Weben-Aten	Sandstone
19	34/5	S. 42	;; ;;	33
20	34/5	S. 43	"	,,
21	34/5	S. 36	"	Limestone
22	34/5	S. 16	" "	Sandstone
23	34/5	S. 39	" "	,,
24	34/5	S. 1	,, ,,	,,
25	34/5	S. 23	" "	,,
26	35/6	C. 6	" Central Halls	Limestone
27	34/5	D. 3	" Weben-Aten	Sandstone
28	34/5	S. 2	" "	,,
29	34/5	S. 41	" "	,,
30	34/5	S. 20	" Broad Hall	Limestone
31	34/5	S. 6	" Weben-Aten	Sandstone
32	34/5	S. 32	· · · · · · · · · · · · · · · · · · ·	Limestone
33	34/5	D. 9	" "	Sandstone
34	34/5	S. 40	" "	,,
35	32/3	P. 64	Great Temple: Gem-Aten, Sanctuary Courts	Limestone
36	35/6	C. 8	Palace: Central Halls	,,
37	35/6		" South-east Courts	,,
38	34/5		" Weben-Aten	Sandstone
39	35/6	C. 7	" Broad Hall	,,,
40	34/5	D. 6	" Weben-Aten	,,
41	34/5	S. 12	" Broad Hall	Red sandstone
42	32/3	P. 54	Great Temple: Gem-Aten, Sanctuary Courts	Alabaster
43	34/5	S. 29	Palace: Broad Hall	Red sandstone
44	32/3	P. 44	Great Temple: Per-hai	Pink granite
45	32/3	P. 58	" " Gem-Aten, Courts 3 and 4	Alabaster
46	34/5	S. 21	Palace: North Harem	Red granite
47	32/3	P. 51	Great Temple: Gem-Aten, Courts 3 and 4	Limestone
48	36/7		Temple Dumps	Pink granite
49	36/7		Magazines south of Temple	Alabaster (weight)

# (f) General Index of the Inscriptions published in Pls. LXXXI-CIII

N.B. For the sake of ease of reference the buildings are grouped under the headings and order of Chapters II-IX. In order to save needless repetition all plate numbers are omitted: it should be remembered that "stoppings" refers to Pls. LXXXI-LXXXIII; "bricks" to Pl. LXXXIII, Nos. I-VIII; "hieratic" to Pls. LXXXIV-XCVIII (including ostraca, dockets, and gypsum specimens); "small seals" to Pl. C; "stone" to the hieroglyphic inscriptions in Pls. CI-CIII.

# GREAT TEMPLE

Entrance. Stoppings: 42, 49, 68, 71. South-west corner. Stoppings: 40, 116.

South side. Stoppings: 37, 44, 50, 88, 89, 98, 146, 148. Hieratic: 167, 177.

Per-hai. Stone: 44.

Gem-Aten, Courts 3 and 4. Stone: 45, 47.

Sanctuary Courts. Stone: 35, 42.

Sanctuary. Stoppings: 62, 73, 129, 145. Hieratic: 15, 90.

"Arab Tomb". Stoppings: 111, 128, 154. Hieratic: 161, 262.

Dump outside temenos, to south. Stoppings: 4, 5, 9, 11, 12, 14, 16–18, 22, 23, 26, 27, 39, 41–3, 45, 47, 48, 51, 60, 61, 63, 65–9, 76, 78–80, 82–6, 94, 95, 99–104, 119, 120, 124, 125, 127, 140, 143, 144, 149–52, 154, 156. Hieratic: 16, 78, 88, 109, 160, 173, 250, 280, 281, 315, 325. Stone: 48.

#### DEPENDENCIES OF THE GREAT TEMPLE

S. 39. 1. Stoppings: 8, 46, 52, 64, 70, 81, 90, 126, 130, 145. Hieratic: 20, 150.

Panehsy's house. Stoppings: 37, 106. Brick: IV. Hieratic: 307, 316, 328.

S. 40. 1. Hieratic: 10, 326.

#### GREAT PALACE1

Servants' Quarters. Stoppings: 115, 121. Hieratic: 33, 35, 51, 157, 233, 234, 271, 296, 329, 330.

North Harem. Stoppings: 35. Stone: 12, 46.

Weben-Aten. Hieratic: 19. Stone: 2, 3, 7, 9, 10, 13-16, 18-25, 27-9, 31-4, 38, 40.

Broad Hall. Stone: 1, 5, 6, 8, 11, 17, 30, 39, 41, 43; see also pp. 185, 186.

Courts south of Broad Hall. Hieratic: 2.

Bridge, East. Stoppings: 87, 108. Hieratic: 56, 66, 102, 241. Small seals: 20, 35.

Central Halls. Stoppings: 38, 110. Hieratic: 1, 12, 36, 38, 60, 73, 76, 94, 104, 105, 145, 155, 171, 176, 178, 230, 246, 249, 257, 259, 260, 264, 265, 268, 273, 276, 293-5, 302, 309-12, 317, 318. Stone: 4, 26, 36.

Rooms flanking the Central Halls. Hieratic: 247, 313.

South-east Courts. Stoppings: 77, 118. Stone: 37.

South Court. Hieratic: 21, 41, 61, 135, 146, 267, 291.

Coronation Hall. Brick: III. Hieratic: 321.

Dumps outside south wall. Stoppings: 113, 117. Hieratic: 74, 77. Small Seal: 27.

# ROYAL ESTATE

P. 42. 1. The King's House. Stoppings: 33, 55, 58. Brick: I. Hieratic: 214, 301, 332, 334.

Bridge, West. Stoppings: 2, 15, 24. Hieratic: 18, 46, 89, 98, 166, 191, 272, 288. Small seals: 31, 32.

P. 42. 2.2 Stoppings: 25, 29, 30, 31, 32, 107, 142, 147. Brick: I. Hieratic: 120. Small seals: 23, 30.

Small Temple. Stoppings: 19, 20, 28, 29, 30, 31, 34, 97, 123. Brick: I. Hieratic: 49, 287. Stone: see pp. 186, 187.

Small Temple, dumps outside south wall. Stopping: 114.

P. 43. 1. Stoppings; 122, 135. Bricks: I, VII. Hieratic: 130. Small seals: 3, 8, 25, 34.

P. 43. 2. Brick: VII. Hieratic: 2, 297.

#### MAGAZINES BETWEEN GREAT TEMPLE AND ROYAL ESTATE

Temple Magazines. Stoppings: 91, 137. Hieratic: 86, 111, 208.

Temple Magazines, Approach. Hieratic: 17, 53, 261, 314.

Surface near Temple Magazines. Small seal: 7.

Magazines south of Temple. Stoppings: 6, 7, 21, 36, 51, 75, 80, 84, 93, 120, 138, 139, 153. Hieratic: 103, 204-7, 217, 278. Small seals: 4. Stone: 49.

- P. 41. 2. Hieratic: 163, 197, 238, 306. Small seals: 22.
- P. 41. 3. Hieratic: 22, 172, 188, 203, 209, 220-2, 235.
- Q. 40. 3. Stopping: 110. Hieratic: 124, 285. Small seal: 37.
- Q. 40. 4. Hieratic: 30, 80, 144. Small seal: 21.
- Q. 41. 1. Stoppings: 56, 105.
- Q. 41. 4. Hieratic: 277.
- Q. 41. 5. Hieratic: 164.

<sup>&</sup>lt;sup>1</sup> The hieratic graffiti published on Pl. XCIX were all found in the Great Palace.

<sup>&</sup>lt;sup>2</sup> Also the wooden coffinette, Pl. CIV.

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Q. 41. 7. Stoppings: 3, 53-5, 58, 59. Hieratic: 34.
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Q. 41. 8. Hieratic: 244, 254.

Q. 41. 9. Stopping: 55. Hieratic: 13, 106, 138, 179, 181, 182, 184, 187, 192, 193, 200, 202, 215, 216, 225, 228, 231, 240, 243, 258, 269, 304.

Q. 41. 11. Stopping: 53. Hieratic: 65, 194-6, 198, 199, 201, 214, 223, 226, 227, 229, 232, 239, 242, 248, 253, 279, 308.

Q. 41. 13. Hieratic: 210, 263.

Q. 41. 14. Stopping: 109. Hieratic: 27, 127, 139.

R. 41. 1. Hieratic: 108, 219.

#### THE RECORDS OFFICE AND ITS SURROUNDINGS

Government Offices: Q. 42. 1. Hieratic: 154, 162.

Q. 42. 3. Hieratic: 270.

Q. 42. 6. Hieratic: 126.

Q. 42. 7. Hieratic: 3, 335. Small seal: 6.

Q. 42. 8. Hieratic: 8, 255.

Q. 42. 9. Hieratic: 64, 117.

Q. 42. 11. Hieratic: 43. Small seals: 26, 36.

Q. 42. 18. Hieratic: 140.

Q. 42. 19. Stopping: 155. Bricks: VI, VIII.

Q. 42. 20. Brick: VI. Small seal: 13.

Q. 42. 21. Stopping: 57. Brick: V. Hieratic: 153.

Q. 42. 23. Hieratic: 331, 333.

Q. 42. 24. Hieratic: 121.

Q. 42. 25. Brick: II. Hieratic: 119.

Q. 42. 29. Brick: I. Hieratic: 58.

Q. 42. 30. Hieratic: 26.

Q. 42. 31. Hieratic: 152.

Q. 42. 32. Stoppings: 74, 131, 136. Hieratic: 7, 128.

Q. 42. 33. Hieratic: 129, 319.

R. 42. 6. Brick: II. Hieratic: 32, 136, 292.

R. 42. 7. Hieratic: 24, 37, 39, 42, 44, 50, 52, 63, 83, 96, 252.

#### Clerks' Houses: 1 1. Hieratic: 112, 168, 320.

2, 3. Hieratic: 266.

10-13. Hieratic: 148, 211, 212, 245, 303.

14. *Hieratic*: 62.

17, 18. Small seal: 33.

21. Hieratic: 28.

22. Hieratic: 68.

23. Small seal: 24.

36. Hieratic: 286.

39. Hieratic: 189.

40. Small seal: 19.

44. Hieratic: 125.

45. Small seal: 28.

54-7. Hieratic: 67.

58-65. Hieratic: 275.

70-4. Hieratic: 69, 151, 218.

# MILITARY AND POLICE QUARTERS

R. 42. 1. Hieratic: 149.

R. 42. 3. Hieratic: 256.

R. 42. 8. Hieratic: 11, 14, 113, 122, 141, 147, 170.

<sup>&</sup>lt;sup>1</sup> For bricks from an earlier building below 38 and 41 see above, pp. 122, 151.

R. 42. 9. Stoppings: 1, 22, 23, 39, 92, 100, 141. Hieratic: 4-6, 23, 25, 29, 31, 48, 70-2, 79, 81, 82, 87, 92, 93, 95, 97, 99, 100, 101, 114-16, 123, 131, 134, 137, 142, 158, 159, 169, 186, 190, 236, 251, 283, 290, 305, 323, 324. Small seal: 17.
R. 42. 10. Stoppings: 10, 72, 104, 112, 113, 132, 133. Hieratic: 9, 45, 57, 59, 84, 85, 132, 156, 224, 237, 322. Small seals: 1, 2, 5, 9-12, 14-16, 18, 29, 38.

#### SOUTH-EAST QUARTER

R. 43. 1. Hieratic: 289.

#### PROVENANCE UNKNOWN

Hieratic: 143, 165, 180, 185, 274, 282, 327. All these came from the 1926/7 excavations and are probably from the Sanctuary of the Great Temple, the Hall of Foreign Tribute, T. 39. 1, or Panehsy's house. It is less likely that any came from the North Suburb.

#### NOT FROM THE CENTRAL PORTION OF THE CITY

A few dockets and stoppings have been included by error, though they were found in other parts of the city. Most of these were discovered in the northernmost palace, excavated in 1931/2, which lies opposite the expedition's northern house. Docket 107, from the North Suburb, has deliberately been included because of the mention of a Sunshade-temple, and because of Černý's corrected version.

Northern Palace. Stopping: 96. Hieratic: 30, 47, 54, 75, 110, 174, 298, 300.

North Suburb. Hieratic: 107 = COA. II, Pl. LVIII. 21.

O. 47. 16 A. Hieratic: 299.

#### CHAPTER XI

### THE AMARNA COLLECTION AT UNIVERSITY COLLEGE, LONDON

#### PART 1: THE AMARNA COLLECTION AT UNIVERSITY COLLEGE

# By MRS. JULIA SAMSON

THE Amarna Collection at University College is composed of objects excavated by the late Professor Sir Flinders Petrie during the season of 1891–2, and of others which he then or subsequently bought.<sup>1</sup>

In the memoir<sup>2</sup> published by Sir Flinders in 1894, which has become the text-book for all later expeditions at Tell el-Amarna, parts of the University College Collection, notably the faience, are described in great detail. A considerable portion, however, with both historical interest and artistic merit has remained unpublished, and the recent cataloguing and arrangement of the material by the writer has afforded an opportunity for further study of it, and of the collection as a whole in the light of the fresh knowledge of this period gained during the past fifty years.

Since this volume embodies the results of the Egypt Exploration Society's work in the Central City, from which section of the city much of the University College Collection must have emanated, the inclusion of some notes on that collection may be of value, containing as it does so many interesting points for comparison with later finds.<sup>3</sup>

### I. Royal Portraits

UC. 401. A fragment of an alabaster (calcite) stela<sup>4</sup> or balustrade depicts the royal family and belongs to the early period of Akhenaten's reign. The early cartouche of the Aten dates it to before the ninth regnal year,<sup>5</sup> and the exaggerated lines of the King's ugly body, and the treatment of the Queen's, also indicate the stage before the artist had broken from Egyptian conventions long enough to achieve an accurate naturalism. It is probably from the Broad Hall of the Palace (p. 77).

The figures are in "relief en creux"; the King followed by the Queen and a princess. The Queen wears a short "bag" wig, and the slope of her forehead, the coarsened lips, and exaggerated chin are similar to those in another portrait of her in UC. 038.

UC. 038. Fragment of alabaster (calcite). Nefertiti wears a long wig and the disk and horns of Isis, and although her face looks older owing to a heavy line drawn from nostril to mouth, it appears that this piece and UC. 401 belong artistically to the same period. (Pl. CV. 10.)

UC. 035. On a limestone<sup>7</sup> fragment in relief is another portrait of a princess, presumably

<sup>&</sup>lt;sup>1</sup> A few pieces, notably fragments of statues and some small objects, were presented by the E.E.S. from the excavations of 1934–5 and 1936. [In addition to the objects in the University College Collection, a selection of objects from Prof. Petrie's excavations is in the Manchester University Museum.]

<sup>&</sup>lt;sup>2</sup> Tell el Amarna.

<sup>&</sup>lt;sup>3</sup> I wish to thank Mrs. Rose for the fine photographs which she made for the plates of this chapter, and Mrs. Vera Samson for the drawings she so helpfully did for it.

<sup>&</sup>lt;sup>4</sup> Petrie, op. cit., Pl. XII, No. 3. Height 53.6 cm.

<sup>6</sup> Height 7.7 cm.

<sup>&</sup>lt;sup>5</sup> Battiscombe Gunn in J.E.A. IX. 172.

<sup>7</sup> Height 12.7 cm.

Meritaten, following a figure of the Queen. In this, also, the princess holds a sistrum in her right hand and a similar attenuation is noticeable in her figure here and on the alabaster stela (UC. 401). In both examples she wears the side-lock of youth, and is described in the inscription as "daughter of the Great Royal Wife Nefertiti". (Pl. CV. 5.)

UC. 010. A portrait of the Queen in the round, with less exaggeration than in these earlier ones, is presented by a small unfinished limestone head about 2.6 cm. high. The cutting is shallow and indistinct, but the set of the head on a long neck and the face in profile are reminiscent of the sandstone head in Berlin; like it, this also shows the support for the tall crown which was to be of another material. (Pl. CV. 11.)

UC. 007. A grey granite head of Akhenaten,<sup>2</sup> broken just below the beard, is probably part of a *shawabti*,<sup>3</sup> and is certainly a portrait (Pl. CV. 12). It is the face of a young king, which bears an arresting likeness to Tut'ankhamūn, and is interesting to compare with the cast in this collection of the head of Queen Tyi, found by Petrie in Sinai.<sup>4</sup> The latter, authenticated by the name of the Queen on her crown, bears a strong resemblance to the grey granite head, which also has a likeness to the yew head in the Berlin Museum<sup>5</sup> attributed to Tyi or Sitamūn. This may be from the Royal Tomb or from the sculptors' area north of the Great Palace (p. 80).

UC. 402. A portrait of a young king occurs again on a limestone relief. Unfortunately, it is broken from above the ear and nose. It is a finely cut head of a young man wearing the blue crown; probably Akhenaten, although there is a youthfulness about it which might suggest Smenkhkarë as it belongs artistically to a later period than that of Akhenaten's youth.

UC. 087. A crudely cut sketch of a man's head on a limestone trial piece bears a resemblance to Akhenaten, but the rough likeness when finished would have probably resulted in a caricature.

UC. 040. A more conventionalized royal portrait than those on the trial pieces is that on a fragment of red granite, which Mr. Pendlebury considers, in the light of his own finds, to be part of a granite stela (Pl. CV. 6). It is presumably Nefertiti, since traces of the King's shoulder and wig show he preceded her. The Queen is offering a libation to the Aten, the rays of which stretch down towards her.

UC. 037. On a trial piece an artist has carved in low relief the heads of two young men (Pl. CV. 1).8 These are possibly studies of a young nobleman, and it is a noteworthy point that they wear a wig similar to that on another trial piece (Pl. CV. 2), the wearer of which has been described by Petrie as Queen Tyi.9 It has been pointed out that the wig worn in these three cases is more often worn by men than women, and that the finely carved face thought to be Tyi more resembles a young man's than a woman's.

UC. 011. An unfinished record of an artist's work is the small trial piece described as "the head of an aged queen wearing uraeus". <sup>10</sup> It is a black ink drawing on limestone and the Queen wears the tall crown. The artist had begun carving his work but only finished the nostril, lips, and chin, and an incorrect line near the ear may have been the cause of his abandoning it. (Pl. CV. 3.)

The lines painted on the neck (an artistic tradition of this period) and the deep carving

<sup>&</sup>lt;sup>1</sup> MDOG., No. 52, Pl. 5.

<sup>&</sup>lt;sup>3</sup> [Cf. above, p. 81.]

<sup>&</sup>lt;sup>5</sup> Winifred Brunton, Great Ones of Ancient Egypt, Pl. opp. p. 120.

<sup>7</sup> Height 15.2 cm.

<sup>&</sup>lt;sup>9</sup> Petrie, op. cit., Pl. I, No. 6 = UC. 013. Height 20.3 cm.

<sup>&</sup>lt;sup>2</sup> Height 6.4 cm.

<sup>4</sup> Petrie, Researches in Sinai, Pl. CXXXIII.

<sup>6</sup> Petrie, Tell el Amarna, Pl. I, No. 5.

<sup>&</sup>lt;sup>8</sup> Height 23 cm.

<sup>10</sup> Ibid., p. 30, par. 72. Height 7.7 cm.

round the mouth give the face a look of age, but it as much resembles some of the portraits of Nefertiti as those of Tyi.

Two red quartzite carvings for inlay are of heads with resemblances to Akhenaten and Nefertiti respectively.

UC. 101. The less broken of the two<sup>1</sup> is seemingly a likeness of the King, with a groove round the forehead for a crown of another material to be attached, and with the eye and eye-brow carved to receive inlays of another material. (Pl. CV. 4.)

UC. 102. The other piece is more fragmentary, consisting of little more than the lips and chin.<sup>2</sup> The modelling is good and the face must have been of great beauty; perhaps that of Nefertiti. (Pl. CV. 7.)

UC. 103. A yellow quartzite head for inlay<sup>3</sup> is an example of fine stonework. It is presumably of the King or Queen as it has been carved to receive a crown, and the modelling of the face is delicate and good. Again the eye and eyebrow are carved for inlays of another material. (Pl. CV. 8.)

UC. 080. On a fragment of red quartzite<sup>4</sup> is a damaged figure of the Queen in relief. The head and legs from the knees are broken off, and the figure is fatter than is usual in representations of her, but she wears the conventional robe, and a fragment of streamer from her wig is preserved. The Queen is worshipping the Aten, and on her upraised right arm are two empty cartouches. In the lower left-hand corner of the relief is a sistrum, held probably by the small figure of a princess now broken off, but of whom mention is made in the broken line of inscription above:  $ms \ n \ [hmt]$ - $nsw \ Nfr$ -nfrw-Itn-nfrt-iy- $it \ cnh \ dt \ nhh$ .

UC. 004. The group in the round of the King, Queen, and a princess has been published by Petrie.<sup>5</sup> All the heads are missing, but the bodies which are against a back-plinth are definitely intended as portraits.

UC. 001. The fragmentary bust of a royal statue<sup>6</sup> in red quartzite furnishes interesting details of the collar carved in low relief (Pl. CV. 9). The head and right shoulder are missing. At the waist on the right side are wrinkles in the flesh suggesting that the figure was seated. The drapery is finely carved in relief over the left arm and in the tie at the waist. Streamers from the crown are shown falling between the shoulders at the back. The back itself is delicately modelled and indicates that this somewhat battered fragment was once part of a statue in the finest tradition of the Egyptian sculptor's technique in hard stone. A pair of cartouches, probably plaques of a type represented in the College collection in glaze, containing the early name of the Aten, is set in the collar over each breast, and a third pair hangs from it in the centre.

The clavicles and intra-sterno-mastoidal fossa are strongly moulded, and are suggestive of a thin body. The neck is mortised to receive the head. The beads of the necklace or collar are unusually detailed.

# II. Stone Carvings in the Round

UC. 002. The torso in crystalline sandstone of a young girl is well known, but previous illustrations of it<sup>7</sup> have not done justice to its beauty (Pl. CVI. 1).

<sup>1</sup> Height 7.7 cm.

<sup>&</sup>lt;sup>2</sup> Height 5 cm.

<sup>3</sup> Height 7.7 cm.

<sup>4</sup> Height 23 cm.

<sup>&</sup>lt;sup>5</sup> Op. cit., Pl. I, No. 1. Height 19 cm.

<sup>&</sup>lt;sup>6</sup> Height 15.3 cm.

<sup>&</sup>lt;sup>7</sup> J. Capart, Lectures on Egyptian Art, Fig. 19. Burlington Fine Arts Club, Illustrated Catalogue of Ancient Egyptian Art, Pl. IX.

A nude figure, headless and broken off from the knees, it stands 15·3 cm. high and is backed by a plinth.

The left arm, now missing, was swung back from the shoulder to catch the hand of another figure which must have faced at right angles, indicating that this is a princess from a group of the royal family, but the figure is so well carved and poised that it loses none of its individual charm by being a fragment.

UC. 006. A less familiar but perhaps finer example of the skill attained by the sculptors in the carving of the human body is a little torso in alabaster (calcite). (Pl. CVI. 2, 6.) This fragment, although mutilated, is obviously part of a toilet spoon, carved, as many other examples from the Eighteenth Dynasty, with the figure of a girl. She is modelled to rest on her stomach, with arms and legs outstretched continuing the straight line of the body. There is a mortise between the shoulders for her head, which would have been looking forward to the perfume dish held between her hands. Although the head is missing and the limbs are broken, the torso was carved with a knowledge of the anatomy of the human body and an understanding of how to portray the grace and flexibility of youth, and the figure is of rare beauty and purity of line.

UC. 150. Another remarkable stone carving in the round is an ankle and heel of red jasper<sup>2</sup> (Pl. CVI. 5). The object has been a complete unit in the make-up of a statue and has a polished surface above the ankle at which point it presumably fitted on to the leg made in a different stone. The instep is cut transversally by a polished surface, where the sandal and foot, also probably of a different stone, were attached.

Two smaller fragments in red jasper, one part of the lips and the other unrecognizable, are perhaps part of the face from the same composite statue.

UC. 092. A red granite fragment from the statue of a private person,<sup>3</sup> showing the transverse section of his head from above the eyebrows to the chin, is in style more reminiscent of sculpture from the reign of Amenophis III than of that from Amarna.

# III. Limestone Reliefs, other than Portraits

UC. 009. The head of a Negro<sup>4</sup> carved in low relief, for inlay (?), is an interesting piece (Pl. CVI. 4). The material is coarse, but the outline of the face and wig is decisive and the modelling of the cheekbone and eye, with the typically thick lips, is skilful, and gives the face a lifelike animation.

UC. 071. Fragment of painted limestone relief (Pl. CVI. 3)<sup>4</sup> depicting a servant carrying offerings (?); broken off at the chin.

UC. 034. Another fragment of painted limestone relief (Pl. CVII. 1)<sup>5</sup> bears a head which is probably that of a princess since she wears the side-lock of youth and has above her head the signs  $\frac{1}{2}$  and  $\frac{1}{2}$ 0 in the remains of a vertical column; these signs are presumably from the normal formula ms n hmt-nsw wrt Nfr-nfrw-Ttn-nfrt-iy-ti cnh-ti dt nhh. The portrait is exaggerated, resembling those of the early art of the period.

UC. 2234. A limestone trial piece<sup>6</sup> shows, in the drawing of hands, the work of a master craftsman and the greatly inferior efforts of a student to copy, both in relief and in a preliminary ink sketch.

<sup>1</sup> Length 7.7 cm.

<sup>&</sup>lt;sup>2</sup> Height 12.7 cm.

<sup>&</sup>lt;sup>3</sup> Height 9 cm.

<sup>4</sup> Height 7.7 cm.

<sup>&</sup>lt;sup>5</sup> Height 15.3 cm.

<sup>&</sup>lt;sup>6</sup> Height 14 cm. M. A. Murray, Egyptian Sculpture, Pl. IV.

UC. 021-033. The collection has many examples of the limestone monkey-statuettes, some of which, as has been noted, were apparently satirical caricatures of the royal family.

# IV. Graffito

UC. 1585. This graffito, on a piece of limestone,<sup>3</sup> is the outline, drawn in ink, of a baboon. In a few sure lines the artist has given a naturalistic impression of the animal and the stealth in his movements.

### V. Glass

The collection contains examples of the usual polychrome and plain coloured glass in fragments of vases, in amulets and ear-rings, and in rods and pieces for inlay.<sup>4</sup>

One piece (UC. 2235; Pl. CVII. 4) is very remarkable, and since it is not included in Petrie's classic description of the glass and glass-making, is undoubtedly a more recent acquisition. It is made of opaque red cuprous-oxide glass, for inlay,<sup>5</sup> and was apparently shaped in a mould, a rare process in glass-making at such an early date. It represents two Amarna princesses side by side, both facing to the right, and with their arms round each other's shoulders.

The flattened back and straight sides of the piece suggest it was moulded and that the shaping and details of the figures were carved while the glass was still viscid. Unfortunately, the portion from below the knees is missing, but the inlay is interesting because of its size, subject, and suggested technique.

There is a pair of ear-rings of the same glass.

### VI. "Faience"

The "faience" in the collection is representative of the various uses of glaze and glazed ware at Amarna; i.e. as tiles for walls, floors, and columns (Pl. CVII. 6); as inlay for the tiles themselves in forms of hieroglyphs and decorative motifs analogous to the stone inlays; for jewellery as amulets, bracelets, finger-rings, and beads in shapes of flowers, foliage, and fruits; and lastly for dishes and vases in domestic use (Pl. CVII. 5, 7, 8).

The process and many of the glazed objects have been described by Petrie,<sup>6</sup> and his publication of the small arts has been used by later excavators on the site to form a corpus.

There remain, however, objects hitherto unpublished, while similar pieces, and in some cases fragments which belong to those in the College collection, have since been excavated by Mr. Pendlebury in the Palace.

UC. 1106. Pendant amulet. Mry Imn; eyelet holes at each end. Blue-glazed composition. (Pl. CVIII.)

UC. 1114. Pendant amulet. Bes as a lion playing pipes. Purple-glazed composition. (Pl. CVIII.)

UC. 1147. Pendant amulet. Celestial cow with disk, horns, and feathers. Green-glazed composition. (Pl. CVIII.)

<sup>1</sup> C. of A. II, Pl. XXXI.

<sup>&</sup>lt;sup>2</sup> J. D. S. Pendlebury, Tell el-Amarna, p. 19.

<sup>3</sup> Width 15.3 cm.

<sup>&</sup>lt;sup>4</sup> Petrie, op. cit., Ch. IV and Pl. XIII.

<sup>&</sup>lt;sup>5</sup> Height 9 cm.

<sup>&</sup>lt;sup>6</sup> Ibid., Chs. II and IV, Pls. XIII-XX. From Pls. XVI-XX, headed Moulds, the individual designs are represented in many instances by the glazed objects as well as by the moulds.

UC. 1238. Pendant amulet. Solar barque with baboons worshipping the disk and crescent of the moon. Green-glazed composition. (Pl. CVIII.)

UC. 1258. Inlay (?). Fragment of foreigner's head. Green-glazed composition. (Pl. CVIII.)

UC. 1360. Spacer. Only half present. White background and inlaid blue daisies with yellow centres. (Pl. CVIII.)

UC. 2038. Ring bezel. Broken; open work, ibex design. Green-glazed composition with details picked out in blue. (Pl. CVIII.)

UC. 2115. Ring bezel. Violet-glazed composition. Inscription "Amen-Rēc, Lord of Cattle and Cedar-wood". (Pl. CVIII.)

UC. 722. A votive ear<sup>2</sup> (Pl. CVIII) made of a coarse frit and glazed blue, looks like a piece for inlay but for the fact that both surfaces are glazed and incised with small ears; ten on one side and two on the other. On one surface, which has retained its colour better than the other, there are traces of sand suggesting the object was put on the ground before the glaze was dry.

UC. 1957. The necklace in this collection is a reconstruction from the many beads found at Amarna by Petrie. The design follows, as closely as the material permits, those collars of Tutankhamūn in the Cairo Museum,<sup>3</sup> and the beads in it are the same varieties as those in the necklace found *in situ* by Dr. Frankfort.<sup>4</sup> They are typical Amarna shapes and their original positions in the collar no doubt varied according to the taste of the maker or the owner, but it appears to the writer that a single colour was preferred for each row.

UC. 782. A unique example of glazed composition is a fragment of a block, thought by Mr. Pendlebury to be a footstool similar to those he found.<sup>5</sup> The glaze is violet-blue and the brick is incised on each side with the head of a bound prisoner, a typical subject for floor or footstool where the Pharaoh could literally trample on his enemies. On one side is an Asiatic and on the other a Negro, and their distinguishing characteristics are admirably portrayed. (Pl. CVII. 9, 10.)

Many of the fragments of glazed household dishes were probably from the Palace, as more have been found by Mr. Pendlebury from that part of the site. Some are in the shape of fish with concave inner surfaces of a whitish glaze, and clever colouring outside to imitate the scales, eyes, and gills; the projecting fins form the handles, e.g. UC. 474, length 8 cm. (Pl. CVII. 8), UC. 478, length 9 cm. (Pl. CVII. 7). Here again the glazed ware has parallels in stone, as some fragments of the alabaster dishes and vases are also in animal shapes. In one instance the duck shape was used, and the remains of this bowl, although fragmentary, testify to the beauty of it in its original state.

UC. 241. Incised decoration on alabaster vase fragments was sometimes inlaid with blue frit, and the stylized designs of flowers and fruits are similar to those of glazed pendants.

The examples in this collection are sufficient to show that all the known colours in glaze were used for the kohl pots and unguent dishes. Inlays of contrasting colours were employed with decorative effect, and were used for inscribing the names of the royal family on their possessions.<sup>6</sup>

¹ If the reading of the rather vague sign after \ is correct this is an interesting anticipation of Wenamun's claim for the god, Wenamun, 2, 23-5.

<sup>&</sup>lt;sup>2</sup> Height 4.4 cm.

<sup>4</sup> C. of A. II, pp. 18, 44 and Pl. XXXVI.

<sup>&</sup>lt;sup>6</sup> Petrie, op. cit., Pl. XIII.

<sup>3</sup> Carter and Mace, The Tomb of Tut-ankh-amen, I, Pl. XXXIX.

<sup>5</sup> Width 7.7 cm.

# VII. Miscellaneous Objects

UC. 2231, 2232. Two bronze rings are inscribed with variant writings of Nfr-hprw-R<sup>c</sup> (Pl. CVIII).

UC. 2233. A large broken scarab<sup>1</sup> pictures Akhenaten supporting the cartouches of the Aten and contains besides the name  $Nfr-hprw-R^r$ , a cartouche of Amenophis IV Ntr-hki-wist, presumably from early in the reign, although the Aten names are too broken to furnish corroborative evidence.

UC. 1927, 2107. Two moulds, interesting for their inscriptions, are shown on Pl. CVIII. UC. 1927 reads "Tut'ankhamūn, Ruler of Southern On (Hermonthis)" and 2107 "Son of Rē', living in truth".<sup>2</sup>

UC. 2228. There are three ivory spindle whorls in the collection which are typical of the Eighteenth Dynasty and have incised geometric designs.<sup>3</sup>

# VIII. Stone Objects

UC. 190. A unique fragment of limestone relief is inlaid with hieroglyphs of serpentine, marble (?), and obsidian or dark glass rods<sup>4</sup> (Pl. CVI. 7). The inscription reads: ndm (?) ib (?) . . . Nfr-nfrw-[Itn]-nfrt-iy-ti . . . This fragment demonstrates the handsome effect achieved in this technique, where the finer work was employed.

In some fragments of columns and wall inscriptions the hieroglyphs have been painted blue, yellow, and red, to resemble inlaid stone.

UC. 085. A fragment of sandstone relief<sup>5</sup> shows the disk with a hole underneath to receive a glazed composition uraeus, of which there are examples in the collection.<sup>6</sup>

A number of fragments from statues show the variety of stone used and the variation in their sizes from statuettes to colossi. These include pieces of the siliceous limestone portraits of the royal family, more of which were found by Mr. Pendlebury.

UC. 368. A grinder of yellow quartzite, unusual from Amarna, can be compared with other grinders in University College. From the middle to the point the stone is worn smooth and marked by concentric rings, and the other end has been roughly hewn to form a handle.

# IX. Inscriptions

UC. 052. A red granite corner-piece<sup>9</sup> displays the sun disk and its rays ("relief en creux") and the early cartouches of the Aten, surrounded by the usual epithets.

On the right face the names of the Aten again appear, preceded by parts of two columns as follows:

- (1) sst [nsw] n ht:f mrt:f Mkt-Itn ms. . . .
- (2) sit new  $n \underline{h}t \cdot f mrt \cdot f \cdot nh \cdot s n pi$ -Itn me  $n \underline{h}mt$ -new  $wrt \dots$

In the name of the second princess the signs  $(nh\cdot s-n-p)$  appear to be a palimpsest. An intrusive  $\triangle$  is clearly visible above the -n, and traces of a possible  $\nearrow$  show between ? and ?; but it is not easily intelligible why Meritaten should have been thought of after Meketaten, nor should her name be written with mrt before itn.

<sup>&</sup>lt;sup>1</sup> Width 7·7 cm. Petrie, *History of Egypt*, II, p. 210.
<sup>2</sup> The t must belong to mst.
<sup>3</sup> Diameter 2·6 cm.
<sup>4</sup> Width 17·8 cm.
<sup>5</sup> Width 16·6 cm.
<sup>6</sup> Petrie, Tell el Amarna, Pl. XVII, No. 323.

<sup>&</sup>lt;sup>7</sup> Length 17·8 cm.

<sup>8</sup> Petrie, Tools and Weapons, Pl. LII, No. 72.

<sup>9</sup> Height 24·1 cm.

The collection contains many fragments inscribed with the names, or parts of the names, of Akhenaten, Nefertiti, and the Aten. Both the early and the late forms of the name of the Aten<sup>1</sup> are found. In addition, the transitional form, in which Hr is written phonetically,<sup>2</sup> is found on two pieces, UC. 098 and 351, which are illustrated on Pl. CVIII. No. 098 is found on an arm from a small red quartzite figure; No. 351 is on a fragment of an alabaster stela on which the signs are incised and filled with blue frit. These are of interest since, to the best of my knowledge, they are the first to be published giving both cartouches of this intermediate form and show that the second cartouche was identical with that of the later form of the name.

UC. 410. A private stela in this collection, unfortunately in a fragmentary condition, is important for the details it furnishes on the uncertain history of Smenkhkarë.

It is made of a fine limestone, but the quality of the relief carving varies remarkably from the careful workmanship on the reverse side to the almost illegible and shallow cutting of the hieroglyphs in the cartouches remaining on the obverse (Pls. CVII. 2, 3; CVIII).

There are eight pieces presumably belonging to it, although only the two largest fragments fit together. These two when joined constitute the top right-hand corner of the stela (25 cm. high).

Part of a cavetto cornice remains on the obverse, of which the central area is deepened from the border, where lotus plants and offerings of loaves and fishes are carved in low relief of superior finish to the poor work in the recessed centre. Here in the top right-hand corner are two pairs of cartouches as placed in a coregency.

The first pair contain the nomen and prenomen of Akhenaten. In the second pair are the names of Smenkhkarë, <code>cnh-hprw-R'-mry-wc-n-R'</code> and <code>Nfr-nfrw-Itn-mry-;h-n-Itn</code>.

The cartouches on the box discovered by Mr. Howard Carter in the tomb of Tut'ankhamūn are the only other inscriptional evidence<sup>3</sup> relating to the coregency of the two kings, which, however, had been suspected by Sir Flinders Petrie, and later by others, from study of the figures of the two kings on the Berlin Stela.<sup>4</sup> The forms of association used for the two names on this stela present variations from the earlier examples which were written  $cnb-bprw-R^c-mry$   $Nfr-bprw-R^c$  and  $Nfr-nfrw-itn-mry-n-wc-n-R^c$ .

The only other fragment which affords significant evidence is one which, although it cannot be fitted to any other, appears to be the central scene.<sup>5</sup> The stone is of the same texture and thickness, and the hieroglyphs match those of the larger fragment on both sides. On the obverse is the lower half of the sun's disk with three broken rows of inscription on the right of it and two on the left (Fig. 27).<sup>6</sup> Below the disk and inscriptions the surface of the stone is hacked as deeply and completely

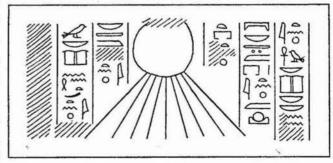


Fig. 27. UC. 410: central fragment.

as it is below the cartouches. There are many scenes from Amarna where the King and Queen

<sup>&</sup>lt;sup>1</sup> Sethe, Beiträge zur Geschichte Amenophis' IV (Nachr. der Kgl. Ges. der Wiss. zu Göttingen. Phil.-hist. Kl., 1921), pp. 101–21; Gunn, "Notes on the Aten and his Names", in JEA. IX. 168-76.

<sup>&</sup>lt;sup>2</sup> Sethe, op. cit., pp. 113, 114; see also above, p. 183.

<sup>&</sup>lt;sup>3</sup> Newberry, JEA. XIV. 4.

<sup>4</sup> Ibid., Pl. IV.

<sup>&</sup>lt;sup>5</sup> Width 13 cm.

<sup>&</sup>lt;sup>6</sup> [Adapted from a hand copy by Mrs. Samson.]

stand worshipping the Aten in the section of the picture which in this case has been damaged. In such instances the cartouches standing in the same relation to the scene as the two kings' names would to this one belong to the Aten, the King, and the Queen. It might therefore be conjectured that, as in this case the cartouches of the King are beside those of his successor, the figure of the young king was also represented below, either with the Queen, if her cartouches were on a fragment which is now missing, or alone with Akhenaten.

Smaller fragments of the obverse show sections of a figure resembling Akhenaten's.

There is no legible case of a palimpsest on the extant fragments, but the unusual poorness of the inscriptions on the obverse side may have been due to hurried additions or alterations at a time of political change.

On the reverse side of the stela (Pl. CVII. 2) is a portrait of the owner represented as a nobleman wearing the gold collar. The figure is carefully carved and some of the original coloured paint remains on his face and on the wig, which is bound by a fillet and crowned by a lump of unguent (?).

Above the head are traces of three vertical columns of inscription. The outside column, forming the edge of the stela, may never have been finished or has subsequently been so badly chipped that no hieroglyphs remain. The middle column reads  $\mathbb{R} \cap \mathbb{R} \setminus \mathbb{R}$ , perhaps to be restored [Pr-hcy]-n-pi-Itn; and the inside column, of which only the lower part is preserved, finishes with  $\mathbb{R} \cap \mathbb{R}$  perhaps for the title of iry-ci "door-keeper", although an unusual writing of it.

[Apart from the additional evidence which it provides in support of the theory of the coregency of Akhenaten and Smenkhkarë, UC. 410 presents other points of interest.

The inscriptions accompanying the disk on the central fragment (Fig. 27) are remarkable and unique in that they are the only known Amarna examples of retrograde writing. The workmanship is obviously hasty and the text contains several errors.

Stelae of this type, worked on both faces, are rare. It is apposite, therefore, to draw attention to the fragment of a similar stela (34/42) on Pl. LXXIII. 8, 9. Unfortunately I have been unable to see UC. 410, and hence it has been impossible to study the fragments together. Nevertheless, the resemblance between 34/42 and UC. 410 is striking; as far as one can judge merely from the photographs, the measurements of the characteristic features, such as the border on the obverse and the scratch behind the kneeling figure on the reverse, are identical, even the fracture of the stone seems to correspond. Similarly the photographs indicate a distinct possibility that 34/42 fits exactly below UC. 410. There can be no certainty without confronting the pieces, but I feel reasonably confident that both do in fact come from the same stela.

If this confidence proves to be justified, the scene on the obverse is puzzling. The fact that on UC. 410 (Pl. CVII. 3) the cartouches of Akhenaten and Smenkhkarë are side by side shows that only the two kings should have been depicted below. But if we examine the obverse of 34/42 (Pl. LXXIII. 8) it will be seen that of the fragments of the two human figures the second seems to be that of a naked woman, though differing somewhat from the normal Amarna portrayal of the female form. Are we to conclude that here Smenkhkarë was depicted rather like the extraordinary Akhenaten of some of the Karnak statues (cf. Ann. Serv. XL, Pl. XXV)?

<sup>&</sup>lt;sup>1</sup> Davies, Rock Tombs of El Amarna, passim.

Any such speculation would be more than rash with such a fragmentary monument. Moreover, one may suggest another explanation of this unusual scene. There is a marked difference between the good workmanship of the human figures on the obverse and the very poor quality of the hieroglyphs. Although Mrs. Samson states that the texts show no evidence of palimpsest, one must reckon with the possibility that the stela originally depicted Akhenaten and Nefertiti and that subsequently their cartouches were erased and replaced by those of Akhenaten and Smenkhkarë. But if this be the explanation, why was the name of Akhenaten erased in the first place and then recut? Whatever the solution of the puzzle may be, the stela UC. 410 +34/42 is a remarkable piece. H. W. F.]

A red granite offering-table  $(25\cdot4\times12\cdot7\ \text{cm.})$ , with underneath it the two hands of the original statue to which it was attached, is inscribed along both sides and across the front. The inscriptions are: left side, name and titles of Nefertiti; right side, name and titles of Akhenaten; front, early name of the Aten, and name and titles of Akhenaten.

UC. 077. Section of a limestone mortuary stela (Pl. CVIII; height 25·4 cm.): the inscription reads wdpw nsw Nhw-m-p3-Itn "the royal butler Nekhuempaaten" (compare the name Itn-m-nhw, Pl. LXXXIV. 5 and p. 149 above, commentary on jar sealings 120-2).

UC. 376. A wine-jar stamp<sup>1</sup> usual in shape<sup>2</sup> is of interest for the inscription showing in the centre the cartouche of Tyi, flanked by two horses, over each of which is carved a lizard, seemingly to be read '8' htrw "rich in horses" (Pl. CVIII).

# X. The Pottery

The pottery is typical of the coarse clay from Amarna and, where painted, shows the usual blue. There is nothing unusual or of outstanding merit.

The Aegean sherds<sup>3</sup> have been typed by Mr. Pendlebury as Late Helladic IIIa of Rhodian or Mainland fabric, excepting some few Cypriote sherds of dark clay with white painted decoration.

#### PART 2: A LIMESTONE OFFERING-TABLE

#### By MRS. L. MURRAY THRIEPLAND

Included among the objects found by Sir Flinders Petrie at Tell el-Amarna, but bearing no mark of more exact provenance, were three fragments of a "limestone" offering-table with the cartouches of Amenophis III (Pls. CVII. 11; CVIII and Fig. 28). Two of these fragments, A and B, joined (Pl. CVIII), giving the width of the table, but C, although undoubtably the lower left-hand corner of the same offering-table, was contiguously unrelated. Both B and C contained parts of five columns of inscription reading outwards, which necessitated an even number of columns for the whole length, while the beginning of a spout on A limited that number in proportion to the probable htp form usual for offering-tables. Within this limitation, then, there were two alternatives: either to join the five columns together forming a total length of 20.5 cm. or to add another column of inscription to both B and C, making twelve

<sup>&</sup>lt;sup>1</sup> Width 15.3 cm.

<sup>&</sup>lt;sup>2</sup> C. of A. II, Pl. XXXII, Nos. 5 and 6.

<sup>&</sup>lt;sup>3</sup> Petrie, Tell el Amarna, Pls. XXVI-XXX.

columns in all. Having regard, however, to the inscription on B from the daily funerary ritual, which required another column for its opening words, and to the fact that if two more tanks similar to those on A, and not tanks of a different form, were to be added, only the second alternative, namely, the two extra columns, would provide enough room and would seem to give the correct position for C.

The three pieces therefore have now been made up to form an oblong  $24 \times 18 \times 4$  cm. The upper surface is roughly divided into half lengthways, the top half being occupied by four rectangular cavities, the lower by twelve columns of vertical hieroglyphs reading from the centre outwards. The beginnings of a spout can be seen on the top left-hand corner of A, and also on A, between the two tanks, are traces of signs, one of which appears to be  $\triangle$ . The fragmentary inscriptions round the sides start at either side of the spout, and running in opposite directions meet in the centre of the opposite side of the table. The under-surface of the offering-table is quite plain.

The workmanship as a whole is roughly but competently executed, and the drawing of the top surface (Pl. CVIII)<sup>1</sup> shows on the right a garbled version of an offering formula from the daily funerary ritual, and on the left a rather better attempt at the words accompanying the rite of censing in the divine cult.

The inscriptions are as follows:

B. [Thy libations, Osiris, thy libations]<sup>a</sup> which come forth from Horus,<sup>b</sup> which come forth from thy son. I have come that I may br[ing thee the eye of]<sup>c</sup> Horus, mayest thou be refreshed therewith. I have presented the exudation which came forth from thee, let not thy heart be wearied because of it. Thy . . . . . . . is under thy sandals,<sup>d</sup> I shall cause a going in and a coming forth for thee at prt hrw.

Notes. (a) Something like  $kbh \cdot k$  ipn  $Wsir kbh \cdot k$  must be restored here, as in the usual formula (e.g. Sethe, Pyramidentexte, 22a ff.), but there seems no room for a cartouche. ipt here for ipn. (b) The usual order,  $s_i \cdot k$  before  $H_i$ , is here reversed. (c)  $\text{log}(\text{constant}) = in n \cdot k \text{ int } H_i \cdot kbh \cdot k$  restored. (d)  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  here  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  here  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  here  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  here  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain, since the sign is identical with the  $\text{log}(\text{constant}) = ki \cdot k \cdot k$  is difficult to explain.

C. [The incense comes, the incense comes. The perfume is over thee, the perfume of the eye of Horus is over thee. The perfume of ]<sup>a</sup> Nekhbet which co[mes forth] from Nekheb,<sup>b</sup> it washes thee, it decorates<sup>c</sup> thee, it makes its place upon thy two hands. Hail to<sup>d</sup> thee, O Incense. Take to thyself the eye of Horus, its perfume is over thee.

Notes. (a) The words of this censing rite are familiar from the divine ritual (Moret, Rituel du culte divin journalier, p. 78, and Golénischeff, Papyrus hiératiques (Cairo Catalogue), I, p. 139). I owe the references to Professor Blackman. I have restored the whole since it is impossible to say what portion was omitted here. (b)  $1 \$  is here spelt  $1 \$ , the n probably mistakenly added as the phonetic complement of  $0 \ nw$ . (c) A badly made sign but certainly  $1 \$  hkr. (d) The surface of the stone has gone at this point and only is clear. The writing seems to have been  $1 \$ , a rather curious contraction.

<sup>&</sup>lt;sup>1</sup> The dotted lines show the extent of the plaster reconstruction, the stippled lines where the surface of the stone has disappeared.

Side A-B (Fig. 28). This land is given to thee . . . . . . Geb, mayest thou wash . . . . . . . his beauties of Horus to flourish for thy [majesty] Amenophis Ḥeḥ Wast, breath [of life] (?)<sup>a</sup>

Note. (a) I can find no similar passage, but have restored tww [n cnh] conjecturally.

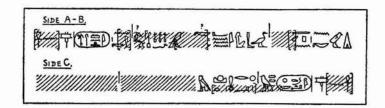


Fig. 28. University College Offering-table: inscriptions on the sides.

Side C (Fig. 28). . . . . . . . . . in the horizon like  $R\bar{e}^{c}$  Harakhte,  $Nebma^{c}r\bar{e}^{c}$ , breath [of life]  $(?)^{a}$ 

Note. (a) tsw n cnh as above.

In spite of the fragmentary condition of these inscriptions, they are interesting, not merely because the extract from the daily funerary ritual is very rarely used on offering-tables until the Twenty-sixth Dynasty and must have been chosen in the present context on account of the royal dedication, but because of the fact that such inscriptions are found at Amarna at all. Unfortunately, there is no record of where exactly this offering-table was found, and there is even a possibility that it was bought from a dealer. Even if its Amarna provenance were certain, it throws no light on religious beliefs of the Amarna period. The absence of any reference to Aten, the conservative tone of the texts, and the form of the name of Amenophis III all render it probable that the offering-table was a product of the sole reign of Amenophis III and that either it was brought to Amarna from Thebes or it was bought by Professor Petrie from some source now unknown.

#### CHAPTER XII

## SMALL OBJECTS OF FAIENCE: THE POTTERY

THE new types of rings, pendants, beads, and inlays are shown on Pl. CXII. None of them show any peculiarities. Moulds were found of IV. B. 30 and IV. C. 59.

Of native pottery contemporary with the city only two new types appeared (Pl. CXII). Both occurred in the fine yellowish fabric with a polished slip sometimes flushing to a warm red which is most commonly found in wine jars and pilgrim flasks.

An extraordinary quantity of vases of the types XV. 23 and XXI. 3-5 was found, particularly in the Magazines belonging to the Temple (pp. 29, 30) and in the Priests' Quarters south of Ḥat-Aten (pp. 100, 101).

Painted pottery of the usual types was less common than in the private houses of the city. Only two vases deserve mention as being in any way out of the ordinary. Both were found in the House of the King's Statue (R. 43. 2, p. 141). One is a wine jar of the type XVI. 1 decorated round the neck with an elaborate design of leaf and petal pendants imitating a faience collar. The other is a funnel-necked store-jar with a deeply undercut rim and two strap handles from rim to shoulder. In front is the head of an ibex; the neck jutting out from the shoulder of the vase and the horns attached to the rim. The colouring was more normal in this case, the background being blue and the details being added in red and black lines.

The two Roman vases, J and K on Pl. CXII, are of a coarse gritty red fabric with no slip or wash. They were both found in conjunction with the Roman walls beside the southern arm of Weben-Aten (p. 51). In date they seem to conform to that of most of the Roman material on the site, i.e. late third to fifth centuries A.D.

Of Cypriote vases sherds from base-ring and white slip wares are comparatively common. Most of them are from bowls, lekythoi, or lentoid flasks.<sup>1</sup>

Mention must here be made of the two fragments claimed as Late Macedonian (C. of A. II, p. 110 and Pl. XLV. 3). These have since been carefully examined by Mr. W. A. Heurtley. Only one parallel to the pattern on the wish-bone handle can be found in Macedonia, and although the colour of both slip and decoration are exactly similar to specimens from Chalcidice, yet the later discovery of a fragment from a Cypriote bowl whose white slip and brown paint had, with the action of the soil, gone to precisely the same green and purple, would now incline one to refer both these sherds to Cyprus, particularly in view of its greater probability as a provenance.

A sherd of unknown fabric, possibly Cypriote or Syrian, was found in R. 42. 9 (Pl. CIX. 6, 140). The design consists of white lines radiating on a plain red ground.

The Mycenaean pottery was uniformly of Late Helladic IIIa date, of the usual Rhodian-Cypriote type which is also comparatively common in the Argolis. The sherds were again found in circumstances which precluded the possibility of their being later intrusions. Pl. LXXVIII. 9 shows the second complete vase to be found in excavations on the site. Pl. CIX shows the

<sup>&</sup>lt;sup>1</sup> It is remarkable that so many open bowls of Cypriote fabric are found when we consider that the cup or bowl is the rarest of L.H. III (Mycenaean) shapes; see below.

sherds. Most of the fragments belong to such shapes as the pilgrim flask, the stirrup vase, or the small amphora which were suitable for travelling, since it was clearly the contents of the vases rather than the vases themselves which were the objects of import. A few sherds from cups, bowls, and rhytons exist which clearly show the presence of an Aegean section of the community. It is strange, however, that no locally made examples such as were found at Gurob and elsewhere should have come to light. The two sherds from a big water jar (Pl. CIX. 4. 222), probably a stirrup vase, which at first glance seemed as if it might have been so made, bear so strong a resemblance to examples found by Blegen at Zygouries (Zygouries, p. 150, Fig. 140) that it is reasonable to suggest that the vase was almost certainly brought up the Nile on a barge and probably contained the crew's water or wine.

The following list gives examples of all the shapes and decoration found by us in the Central City. Square brackets imply that the shape or decoration has been found on the site, but not by us.

- 1. Pilgrim flask. Cf. complete example C. of A. II, Pl. XL. 5. Sides: always concentric circles. Vertical bands below handles: chevrons (Pl. CIX. 6. 114); spirals (Pl. CIX. 2. 553); wavy lines (Pl. CIX. 2. 192); [floral designs (B.M. Catalogue of Vases, I. i. 998); horizontal lines (C. of A. II, Pl. XLV. 1)].
- 2. Stirrup vase. Complete example Pl. LXXVIII. 9. Decoration: Body: except for the example in Pl. LXXVIII. 9, which shows a broad band of chevrons, the decoration is always confined to broad and narrow bands. Top of false neck: concentric circles. Hands: solid bar of colour. Shoulder: close chevrons (Pl. CIX. 2. 605); loops (Pl. LXXVIII. 9). Typical flower (Pl. CIX. 2. 606) [a stylization of the last (B.M. Cat. 999. 3)]. Except for the example in Pl. LXXVIII. 9, which is globular, all the vases are slightly squat with a distinct shoulder. Neither the very squat nor the piriform shape occurs.
- 3. Amphora. Small with three handles. Decoration: body and neck: broad and narrow bands. Shoulder on a level with the handles: loops (Pl. CIX. 5. 373a); vertical lines (*ibid.* b); lattice work (not illustrated, unnumbered from rubbish-heaps); scale pattern (not illustrated 32/248); [wavy lines (B.M. Cat. 992. 4)].
- 4. Two-handled jars. Decoration: Body and neck as last. Shoulder on a level with the handles: close overlapping flower design stylized into concentric semicircles (Pl. CIX. 6. 151a); [floral designs, particularly chain pattern of ivy leaves in white paint on dark band (B.M. Cat. 993)].
- 5. Rhytons or fillers. Pl. CIX. 3. 382, 415, 492. These are the only examples known from the site. The decoration of the lower part, which is all that survives, consists of broad and narrow bands. The only other example from Egypt is from Gurob (B.M. Cat. 981) which has a stylized plant design below the rims.
- [6. Squat globular alabastron. Decoration: wave of solid colour near the base. Rings of dots. B.M. Cat. 991. 1.]
- 7. Pyxis or cylindrical alabastron. Decoration: lattice work round the shoulder (not illustrated: unnumbered from rubbish-heaps; cf. B.M. Cat. 991. 2).
- [8. Stemmed goblet. Only one sherd from top of stem (B.M. Cat. 995). Decoration usually consists of solid wash over stem and base, a few bands low down on body, spirals or some simple design below rim; cf. B.M. Cat. 616.]
  - 9. Cups. With or without single vertical handle. Decoration: groups of wavy lines at

intervals forming a kind of panel pattern (Pl. CIX. 2. 379); rows of loops (Pl. CIX. 2. 532); [wavy line running right round, a degeneration of octopus tentacles (B.M. Cat. 994. 1); three grooves below the rim (ibid. 990)].

- 10. Bowls. Shape as B.M. Cat. 996. Decoration: monochrome; [large broken zigzags on level with handles (B.M. Cat., loc. cit.)].
  - [11. Jugs. Decoration on shoulder; linked spirals or linear designs. B.M. Cat. 997.]
- 12. Water jars. Coarse fabric. Linear designs (Pl. CIX. 4. 222). These sherds very much resemble those from enormous stirrup vases found in the Potter's Shop at Zygouries (*Zygouries*, p. 150, fig. 140).

Looking at the above designs it is remarkable to note that the designs in white paint which were found by Petrie in the Central City have never reappeared, either in the private houses or elsewhere in the Official Quarters.

#### CHAPTER XIII

#### **ANALYSES**

- 1. Examination of a deposit in a wine jar of type XVI. 1 found in the inner sitting-room of the Commandant's house in the Police Barracks, R. 42. 10 (see p. 134).
- 2. Notes on samples of plaster, 33/89, 92, 237, 238, 239 (see above, pp. 180, 181).
- 3. Notes on the contents of vases from the rubbish-pits below and outside the south wall of the Coronation Hall at the south end of the Great Palace (see p. 61).
- 4. Notes on a sack full of wool from house Q. 41. 8 (33/268, p. 109, above).

#### 1. Examen d'un Résidu recueilli dans une Amphore

## By PROF. L. MATHIEU

(Agrégé de Sciences Physiques et Naturelles, Membre Correspondant de l'Académie d'Agriculture de France, Directeur de l'Institut Oenotechnique de France)

De ce résidu, il a pu être séparé:

- 1° des fragments en constituant la masse principale, de formes irrégulières, à l'état spongieux et de grosseurs différentes de 15 mm. à la forme pulvérulente, et dont il a été noté par ordre d'importance les colorations suivantes: jaune clair, jaune foncé et brun.
- 2° de petits morceaux de parois d'amphores.
- 3° des pépins entiers ou brisés.
- 4° des grains de sable de 3 mm. et de plus fins.
- 5° de petites pellicules végétales jaune clair ayant l'aspect, à la loupe, de fragments de tiges de blé ou de graminées.
- 1° Masse principale. J'ai cru inutile d'examiner séparément les parties à l'état spongieux ne différant que par leur coloration, et ai jugé qu'une analyse qualitative seule était justifiée.

L'analyse a établi que ces masses spongieuses étaient constituées principalement par des carbonates de potassium, sodium, calcium, magnésium, fer et ammonium, avec de petites quantités de sulfates, phosphates, chlorures et sans doute des traces de sels et métaux que présentent les lies des vins et qui n'ont pas été recherchés.

Les fragments jaune clair sont formés surtout de carbonates sans grains de sable; les bruns présentent des composés organiques, riches en fer, avec peu de sable siliceux.

L'absence de sucres réducteurs, des acides tartriques, maliques, libres ou combinés, a été constatée, ainsi que de matière colorante du vin; d'ailleurs ces acides libres n'ont probablement pas existé dans ces raisins où les conditions climatériques en provoquent la disparition pendant la maturation, étant donnée l'oxydation des phénomènes respiratoires des fruits sous l'action de la radiation solaire intense du climat; cependant la présence de tartrates, abondants dans tous les raisins, les moûts des vins et leurs dépôts, n'a pu être manifestée, par suite, sans doute, de leur décomposition comme elle se produit dans les vinasses de distillation et les lies humides par des fermentations qui les transforment finalement en carbonates.

Il a été noté la présence de faible quantité de matières organiques, en particulier de matières pectiques, d'une substance soluble dans l'eau en abaissant la tension superficielle en lui donnant une moussabilité très notable; tous ces résidus spongieux par dessiccation à 100° perdaient une petite proportion d'eau provenant soit des matières organiques, soit d'eau de constitution ou de cristallisation.

- 2° Fragments d'amphore. Leur petit nombre, d'une épaisseur de 5 mm. environ, a seulement permis de noter qu'ils étaient constitués par une argile ferrugineuse légèrement calcaire, paraissant avoir été seulement séchée et non cuite au four, cuisson qui aurait donné une teinte rouge par l'oxyde de fer, résultant de la décomposition avec oxydation du composé ferreux. Tandis que leur face extérieure présentait nettement les sillons parallèles produits lors de la confection au tour, l'intérieur n'a pu déceler de trace de poix ou de résine cuite employée fréquemment par les vignerons de l'antique Égypte pour assurer l'étanchéité des parois quand elles étaient trop poreuses. Peut-être avait-on voulu éviter le goût de térébenthine ou de résine que la poix cède au vin ? Ou avait-on compté sur le tartre du moût ou du vin pour les affranchir et les imperméabiliser, comme le font encore souvent les vignerons modernes pour les cuves en ciment? La présence de tartrate n'a pu être constatée sur les faces intérieures des fragments d'amphore en notre possession.
- 3° Pépins.—L'état de dessiccation de ceux-ci, qui les rend friables, a écarté toute idée d'essayer leur faculté germinative; il eût pu être intéressant, d'après la morphologie des pépins entiers, conservée grâce à leur enveloppe coriace, de rechercher la parenté des vignes qui les ont produits avec les cépages actuels cultivés en Haute-Égypte. Malheureusement, mon camarade d'école et ami M. Adrien Berget, Proviseur au Lycée français du Caire, et ampélographe très compétent, n'a pu se procurer à cette époque les pépins des vignes actuelles et par suite faire des comparaisons qui d'ailleurs seront possibles avec les nombreux échantillons de pépins anciens que possède le Musée Agricole d'El Dokki près du Caire.

Ces pépins ne contiennent plus de tannon soluble qui est complètement résinifié de même que leur huile, dont ils pouvaient contenir 6% environ de leur poids, a été entièrement oxydée et saponifiée. Ce sont probablement ces résinates et les savons alcalins issus des acides gras de l'huile de pépins et des corps gras de l'autophagie des levures qui ont contribué à donner à l'eau de macération de ces vestiges une moussabilité exagérée et une teinte jaune clair qui s'ajoute à celle des sels ferriques.

- 4° Grains de Sable. Il en est de deux sortes, les plus gros formés exclusivement de carbonates de calcium et de magnésium avec trace de fer, les plus fins de silice pure; les grains calcaires et partie de la masse principale siliceuse proviennent de souillures postérieures à la dessiccation du dépôt ou partie de raisins chargés de limon qui aurait été entraîné avec le jus de raisin lors de son extraction; en tous cas une partie de ce sable siliceux que ne présentent pas les fragments spongieux jaune clair, a dû être introduite dans l'amphore avant la fermentation des masses spongieuses; par sa grosseur, il ne semble pas avoir été apporté postérieurement par le vent du désert ou simoun chargé de sable toujours extrêmement fin; peut-être aussi ces sables proviennent-ils des débris du bouchon de l'amphore, le plus souvent formé de sable argileux, calcaire et de paille hachée.
- 5° Débris végétaux.— Leur examen au microscope confirme ce que leur aspect fait prévoir: ce sont des fragments de tiges de végétaux constitués surtout par des vaisseaux an-

nelés ou spiralés, avec de rares cellules allongées polyédriques paraissant vides de tout contenu; d'assez nombreux filaments mycéliens de mucédinées y sont adhérents. Ces débris végétaux proviennent probablement de la paille qui formait la liaison de la matière argileuse calcaire du bouchon de l'amphore dont les débris ont dû être mélangés au résidu, la texture conservée du tissu végétal, la non-inclusion dans les débris spongieux font supposer que ces fragments végétaux sont tombés dans le résidu après sa dessiccation.

Comme il a été publié récemment que des vignerons de l'Ancienne Égypte provoquaient la fermentation de leurs moûts de raisins par leur adjonction de graines de céréales à demi-cuites, on aurait pu supposer que ces débris végétaux provenaient des enveloppes de grains d'orge ou de blé ajoutées dans ce but, additions que nous ne voulons pas discuter ici, mais qui, dans ce cas particulier, est contredite par l'examen microscopique qui indique non un tissu de péricarpe, mais de fragment de tige par la présence de nombreux vaisseaux annelés et spiralés.

Quant aux filaments mycéliens de mucédinées, ils peuvent provenir de moisissures qui se sont développées sur ces résidus encore à l'état pâteux, ou après leur dessiccation et une humidification si celle-ci a été possible, par suite de l'existence de matières organiques dans ces résidus et des propriétés hygroscopiques des carbonates calcaires et des masses spongieuses.

Levures et Micro-organismes.— Bien que l'alcalinité très prononcée des résidus ait fait supposer qu'il était inutile d'y rechercher non-seulement la présence de levures encore vivantes, mais même de restes de levures, j'ai chargé de cette recherche un de mes anciens élèves M. Jean Renaud, Diplômé d'études supérieures de la Faculté des Sciences de Paris, familiarisé avec l'étude des levures et travaillant alors au Laboratoire de M. Guillermond, au Muséum, spécialisé dans l'étude des levures alcooliques. Je transcris ici les résultats de son étude, datée du 12 Mai 1935:

"I) L'examen microscopique du dépôt a montré une structure hétérogène intermédiaire entre l'état amorphe et l'état cristallin.

"II) J'ai ensemencé un fragment débarrassé des zones superficielles dans un tube de moût de bière liquide, stérilisé. La masse est tellement desséchée qu'elle est restée compacte sans s'hydrater. Huit jours après l'ensemencement, il s'est révélé un développement de bactéries et levures que je n'ai pas pu identifier — un type de levure; le plus abondant a rejeté en dépôt d'abord avec une faible fermentation et ensuite a formé un anneau blanchâtre à la surface du liquide; cette levure en forme de saucisse est très petite,  $8\mu$  de long sur  $2\mu$  de large. Je n'ai pas rencontré de formes sensables dans les levures du vin. J'attribue toute cette microflore aux contaminations accidentelles. Très probablement, si mon fragment avait été traité rapidement par une solution étendue d'hypochlorite, il n'y aurait pas eu de végétation.

"D'ailleurs, d'après ce que l'on sait sur la durée de vie des levures, il est absolument impossible que celles-ci aient pu résister, même sporulées, à tel manque d'eau.—"

Faut-il rapprocher ces conclusions de l'affirmation récente d'un chimiste rapportant qu'il a pu déceler qu'une matière terreuse brune recueillie sur les parois d'une amphore d'une fouille d'Égypte, était originaire de levure de bière? Pourquoi de levure de bière et non pas de vin, ce qui eût été plus normal; mais même pour justifier une telle origine sans envisager la race, il eût fallu que les constituants de "cette matière terreuse brune" puissent être identifiés comme provenant de la décomposition de la levure, or, c'est là un problème qui n'est pas facile à résoudre étant donné que la levure modifiée d'abord par autophagie, devient rapidement, à l'air, le siège de multiplications de micro-organismes, bactéries et mucédinées, sans compter les phénomènes d'oxydation lente.

Conclusions. De ces constatations et de ce que nous savons sur les constituants des vins, de leurs lies, et de leur évolution,

il résulte que ces vestiges proviennent d'une série de modifications éprouvées par le liquide remplissant l'amphore à l'origine; était-ce du jus de raisin tel que le donne le pressurage? La présence de pépins tendrait à le faire supposer, ils auraient été entraînés avec le moût s'écoulant pendant l'extraction par les procédés primitifs de pressurage. Cette présence de pépins est aussi un indice que le débourbage des jus de raisins, pour en séparer le dépôt avant le départ du bouillage, actuellement fréquemment employé, n'était pas pratiqué, d'ailleurs il nécessite la sulfitation ou incorporation de soufre brûlé, opération qui n'est apparue qu'à l'époque romaine.

Si l'amphore n'avait été qu'un récipient de conservation du vin après sa fermentation, le résidu n'aurait présenté de pépins que très exceptionnellement, or leur présence qui est fréquente dans les amphores trouvées dans les caves anciennes, fait supposer que dans ces cas, le vin était demeuré dans son amphore de fermentation; cependant le soutirage des vins était pratiqué comme en témoignent certaines peintures funéraires des tombeaux.

D'ailleurs, que ces résidus proviennent directement de jus de raisins qui auraient fermenté et dont le vin aurait été conservé dans le même vase, ou que ce dernier ait servi seulement à la conservation du vin, la constitution des résidus ne différerait que par une proportion de tartre, et de résidus de levures déposés après fermentation et par suite moins abondants dans le vin; mais les modifications éprouvées après la fermentation eussent été identiques.

En l'absence de données sur l'état de ces résidus en place dans l'amphore, sur les conditions de l'atmosphère ambiante comme température et état hygrométrique, leur étude ne peut être basée que sur les connaissances acquises du processus des phénomènes que peut éprouver le vin dans des conditions identiques.

Le vin résultant de la fermentation des jus de raisin a éprouvé d'abord une concentration par évaporation lente d'eau et d'alcool et probablement à un certain stade, il a été le siège d'actions bactériennes d'abord aérobies par les mycoderma vini et acéti; cependant on ne retrouve aucune trace d'acétates, ni de propionates, butyrates et autres sels d'acides gras, produits par les anaérobies, agents des diverses tournes.

L'état spongieux de ces résidus qui rappelle celui des cendres gravelées obtenues autrefois par la calcination à l'air des tartres bruts, ne peut être attribué à une action de température élevée qui aurait décomposé les bicarbonates ou déshydraté les corps organiques; il semble qu'il puisse être attribué à un dégagement de gaz carbonique ayant une certaine analogie avec la fermentation qui donne l'état spongieux au pain, état que stabilise la cuisson.

Ces résidus encore à l'état pâteux auraient été le siège d'une multiplication assez active de micro-organismes, bactéries et moisissures, provoquant une effervescence qui a été suivie rapidement d'une dessiccation ayant solidifié la masse à l'état où elle a été conservée pendant des siècles; la pâte fluide résultait d'une concentration dans une faible quantité d'eau des constituants fixes, tartrates, sels organiques ou leurs dérivés, gommes, tannoïdes ou dérivés, glycérine, tous produits alimentaires pour nombre de micro-organismes, en particulier pour les mucédinées. Celles-ci abondantes partout et agissant même aux très basses températures ont dû achever la destruction de toutes les parties organiques, qui ont été transformées en presque totalité en carbonates, l'anhydride carbonique étant le terme ultime de ces actions microbiennes auxquelles s'ajoute l'action oxydante de l'air; l'état de ces vestiges n'est donc qu'un cas particulier de la destruction des matières organisées telle qu'elle se passe à la surface de la terre.

La nature de ces vestiges, en dehors des éléments non issus du vin ou du raisin, sable, calcaire, argile, etc., est donc constituée par les sels minéraux apportés par le raisin, sulfates, chlorures, phosphates, mélangés à une forte proportion de carbonates des métaux, potassium, sodium, calcium, magnésium d'ammonium, ces derniers provenant des matières azotées du raisin ayant servi à l'alimentation des micro-organismes et constituant des résidus de digestion; la caractérisation des nitrates si fréquents dans les milieux calcaires et les terres alcalines des pays chauds et par suite possibles en un milieu alcalin comme ces résidus, a été négative; par contre la présence du fer en quantité dépassant notablement celle que le raisin avait pu apporter, 10 à 15 mmg. par kilo, ne peut provenir que d'apports accidentels. Faut-il les attribuer au contact d'outils en fer ? cela paraît peu probable, car si le fer était déjà connu, l'acier qui seul présente une résistance convenable pour l'outillage, était peu connu, le métal couramment employé à cette époque étant le bronze ou airain.

D'ailleurs du fer a pu être apporté par l'attaque par le vin des parois intérieures de l'amphore et mélangé au résidu par les matières terreuses provenant des débris du bouchon de glaise ferrugineuse, ce que peut faire supposer la présence des fragments de paille hachée, soit encore par des souillures après la rupture de l'amphore, surtout si l'atmosphère ambiante était chargée de poussières ferrugineuses.

La petite dose de chlorure établit qu'un tel vin n'a pas reçu de sel marin ou d'eau de mer, comme cela a pu se pratiquer dans certains vignobles voisins de la Méditerranée, et a pu s'y perpétuer jusqu'au siècle dernier.

Ces vestiges présentent donc la plus grande analogie, par leurs constituants originaires du raisin, avec les produits que donne la décomposition soit des vinasses de distillation, soit des tartres bruts de vins mal desséchés ou exposés dans une atmosphère humide et leur constitution vient confirmer les observations déjà maintes fois notées sur les vestiges de même origine recueillis dans les tombeaux de l'ancienne Égypte.

#### 2. Notes on Plasters, Nos. 33/89, 92, 237, 238, 239

#### By DR. A. F. HALLIMOND

Portions of moulded white or grey plaster, very friable. These are apparently mixtures of calcium sulphate with calcium carbonate. The descriptions given are necessarily incomplete on account of the complexity of the materials in the calcium sulphate plasters.

All the samples have been made from finely powdered materials about the same grade as a modern plaster of Paris; they contain small amounts of impurities, chiefly sand grains or fine silica. They seem to differ somewhat in the coarseness of the sulphate powder and in the proportion of sulphate to carbonate, so that they probably represent different preparations. They show many air-bubbles, indicating that they were moulded from a fluid mixture.

Calcium Carbonate. This is present as minute rhombs or groups, and probably results from the subsequent carbonation of a burnt lime.

Calcium Sulphate. Numerous angular fragments form a substantial part of the plaster. They are somewhat fibrous, with positive elongation and moderate birefringence; refractive index 1.56 and higher. They might well be "anhydrite  $\beta$ " which forms when the heating of gypsum is carried beyond the stages usually employed for plaster of Paris. Such a material

might form a slow-setting plaster if kept moist, but it does not appear that gypsum has formed in any substantial amount in these samples, whereas common plaster sets to a felted mass of gypsum.

There are also particles, especially in 92 and 238, which have a somewhat spindle-shaped outline and negative elongation, which I cannot identify with the known forms of anhydrite: they are not gypsum.

Assuming that analysis confirms the general nature of these compositions, it would seem that they were mixtures of ordinary lime plaster with over-burnt and slow-setting gypsum plaster. Probably the powders were burned separately, since the temperature of formation of lime in the kiln would probably have sufficed to convert the sulphate to ordinary anhydrite.

# Additional Note, by DR. H. E. COX

The results which are set out below confirm Dr. Hallimond's opinion that the plasters are essentially mixtures of burnt calcium sulphate and calcium carbonate in varying proportions. There is only a trace of iron oxide and a small amount of insoluble silicate, mostly sand.

I do not know exactly what significance attaches to the proportion of combined water in ancient materials of this kind. Anhydrous  $CaSO_4$  requires 6.6 per cent. of  $H_2O$  to produce plaster of Paris (i.e.  $CaSO_4$ .  $\frac{1}{2}H_2O$ ) or 26 per cent. of water to produce  $CaSO_4$ .  $2H_2O$  which is hydrated gypsum. So as these plasters contain about 60 per cent. of  $CaSO_4$  the combined water in No. 89 is less than that in plaster of Paris. In No. 237 it is rather more than in plaster of Paris and in the others still more, but in no case is it sufficient to indicate a completely hydrated gypsum or  $CaSO_4$ .  $2H_2O$ . So it seems possible that the plasters were originally over-burnt and now consist partly of hydrated gypsum and partly of anhydrite.

			No. 89	No. 92	No. 237	No. 238	No. 239
Moisture (loss at 100° C.) .	•		0.98	3.96	0.38	0.22	0.22
Combined water			2.66	8.61	4.22	9.17	6.45
Silica and insoluble silicate .			4.48	4.80	5.08	3.46	3.67
Iron oxide and alumina (Fe <sub>2</sub> O	3, Al <sub>2</sub> O	3) .	0.84	1.32	0.70	0.56	0.52
Sulphate (SO <sub>3</sub> )	•		35.28	34.47	33.91	31.34	34.38
Lime (CaO)			40.39	34.26	40.65	38.76	41.15
Calculated composition:							
Calcium sulphate (CaSO <sub>4</sub> )		.	59.99	58.62	57.66	53.30	58.46
Calcium carbonate (CaCO <sub>3</sub> )			27.98	18.04	30.16	29.97	30.46

## Additional Note, by O. H. MYERS

These samples are perhaps in one way the most interesting ever subjected to analysis from Ancient Egypt, since they were themselves submitted as samples by the contractors or foreman to the responsible official for the building of parts of the Central City (see p. 180). For this reason it seemed particularly important that they should be examined. The reports by Doctors Hallimond and Cox raise one or two points of interest.

The analyses show remarkable uniformity with the exception of the calcium carbonate content of No. 92. The arithmetical means of the percentages of the different main substances are:

Calcium sulphate and	d comb	oined	water	r.		$63.83 \pm 0.56$
Calcium carbonate						$27 \cdot 32 \pm 1 \cdot 20$
Silica and insoluble s	silicate	(prob	ably	chiefly	sand)	4·30±0·19

The gypsum in particular shows a very low percentage probable error. If we compare these figures with those for the gypsum plaster from the tomb of Tutankhamun (A. Lucas, Ancient Egyptian Materials and Industries, London, 1934, p. 416, Nos. 1–9, 11) we find considerable differences. Lucas's figures are:

Gypsum								$77.1 \pm 0.7$
Calcium	carbor	ate (v	with in	on an	d alu	mina)		$9.7 \pm 0.7$
Sand .								$13.2 \pm 2.2$

(the addition of the iron oxide and alumina to our examples would make a very small difference). It is noticeable that the Amarna specimens are much more even than those from the tomb, which may be because they are all samples for one job prepared at the same time, or because they are, so to speak, "promise", whereas those from the tomb are "performance". More remarkable is the difference of composition. The specimens from the tomb of Tut'ankhamun show about 13 per cent. more gypsum, 9 per cent. more sand, and 18 per cent. less calcium carbonate. The sand is probably an impurity introduced for economy's sake by the contractor (the iron oxide and alumina are natural impurities in the limestone), but the difference in the calcium sulphate and calcium carbonate percentages needs some explanation.

Lucas maintains (op. cit., p. 73) that lime was unknown in Egypt before the Ptolemaic period, yet there is much to support Hallimond's view of the formation of the plaster, and Cox is of the opinion that it may quite well be correct. Obtaining 700° C. would not have presented any difficulty to the people of the Eighteenth Dynasty, since much higher temperatures were required for other processes with which they were familiar, and they may have found the mixed plaster especially suitable for their purpose. The alternative explanation, that the calcium carbonate was an impurity left or added to gain greater whiteness, must not be ignored. The extra water of combination might have been the result of a process of "hydraulicking" a pottery limestone (see Brammall in Mond and Myers, Cemeteries of Armant, I, p. 129) had the quantities of alumina and iron oxide been sufficient, but they are not.

It may be remarked that if a mixture of lime plaster and gypsum plaster was intended in the Amarna samples, a higher ratio of sand rather than a lower would be expected.

At present the evidence is inadequate to provide a basis for a final decision whether the samples were a mixture of lime and gypsum plasters or a gypsum plaster with calcium carbonate added or left for a greater whiteness, though an examination for Foraminifera might settle the question.

More difficult to explain is the overfiring of the gypsum with which both Hallimond and Cox concur. One can hardly believe that the Egyptians were unable to obtain the correct temperature, since in making blue frit they were obliged to attain a temperature of between 800° and 900° C. and to make a large quantity at the same time to keep a temperature within a few degrees of 850° for about two days. It is equally surprising that they should not have bothered to obtain the right temperature even for their samples.

3. CONTENTS OF VASES FROM RUBBISH-PITS BELOW AND OUTSIDE THE SOUTH WALL OF THE CORONATION HALL AT THE SOUTH END OF THE GREAT PALACE

## By L. A. BOODLE

- 1. Vase of shape XV. 3 (decorated). Loose sand (preponderating); some broken pieces of bone; thin flakes of inorganic matter (possibly flakes peeled off from the interior of the vase); friable brownish lumps consisting of vegetable matter (mixed with sand), and including the epidermis of a Grass; fragment of an ox-rib.
- 2. Vase of shape XV. 21 (decorated). Sand; a large amount of vegetable matter in porous lumps (with sand) and more broken material again, including the epidermis of a Grass as the recognizable part of the more or less decayed plant-tissues; seeds of one of the Cucurbitaceae, probably a variety of melon (*Cucumis Melo L.*); one or two small fragments of charcoal (not identified); one minute fruit, not identified but perhaps belonging to one of the Cyperaceae (Sedge Family).
- 3. Vase of shape XIII. 13 (decorated). Similar to those of last. A considerable number of Cucurbitaceous seeds, apparently of a variety of melon; friable lumps of vegetable matter (with sand) again including the epidermis of a Grass; a vertebra of some small animal; part of the upper jaw of a young pig. A few of the melon seeds are embedded in the friable lumps.

I suggest that the porous or friable lumps may be the more or less decayed remains of the grain of a cereal, and, if so, probably *Triticum dicoccum*, Schubl., Emmer (wheat). This, at any rate, appears possible, as the Grass epidermis seen in the material is similar to that of husks of Emmer.

## 4. Notes on a Sack of Wool from House Q. 41. 8 (p. 109)

## From information received from DR. L. KEIMER

This sack (Pl. CXI. 2-5) is so unusual an object that Dr. Keimer, not knowing at the time the circumstances of its discovery, was inclined to attribute it to as late a date as the Coptic period (*La Liberté*, 14 May 1933). It was found, however, wedged between two cornbins at a depth of not less than a metre from the surface and was resting on the ground-level of the courtyard in which the cornbins stood. It is therefore almost inconceivable that it should not be contemporary, the more so in that no objects of later date were found in this area. This being the case, it must almost certainly be a foreign import.

The sack, c. 1·15 metres long by 0·63 in breadth, is of woven goat's hair, the technique being that of carpet weaving. The main body is left in its natural colour, but three longitudinal stripes 10 cm. in width have been added, after weaving, in purplish brown. Inside, besides a mass of goat's wool were five great balls of wool varying from 9 to 17 cm. in diameter and consisting each of several hundred metres of spun wool. With these was a square woollen garment firmly woven 1·70 metres by 1·40 with strings for attachment at each corner.

<sup>&</sup>lt;sup>1</sup> It must be admitted that the sack and its contents are in an admirable state of preservation, much better than that of any similar remains in the district.

#### CHAPTER XIV

### ADDENDA AND CORRIGENDA TO CITY OF AKHENATEN, PART II

THE aerial survey of the North Suburb, made by No. 45 Squadron R.A.F., is shown on Pl. CX, both vertical and oblique views being given.

An object which was illustrated in colour (*C. of A.* II, Pl. XLI. 1) from a restored drawing was the box from House U. 33. 9. The original has since been made up in the Museum at Cairo by Aḥmed Eff. Yūsef of the Moulding Section, and a photograph is here shown in Pl. CXI. 1.

A misprint occurs on p. 117 of C. of A. II where IV. E. 6 should refer to Petrie's 171, not 161.

An unsuspected series of concrete foundations was brought to light by the floods of the summer of 1934 in square R. 32, i.e. in the north-west corner of the North Suburb, close to the cultivation and some distance from any other building. This has not been excavated, but in plan it seems from a superficial inspection to conform to the "pavilion" type exemplified in O. 42. 1 and 2 (p. 81) and that at the entrance to the Great Temple (p. 14).

The following report refers partly to C. of A. II and partly to unpublished material from the North City. It was received too late to include in the previous volume.

# REPORT ON ANIMAL REMAINS FROM TELL EL-AMARNA, UPPER EGYPT

By J. WILFRID JACKSON, D.SC., F.G.S.

(formerly Senior Assistant Keeper of the Manchester Museum)

# Introduction

While engaged in studying the remains of sacred cattle from the Baqaria and Bucheum, at Armant, Upper egypt, in the winter of 1931–2, I received from Mr. J. D. S. Pendlebury a consignment of animal remains obtained from excavations at Tell el-Amarna. These consisted of three skulls and a few limb-bones of oxen, and one skull and two or three bones of sheep. The ox skulls and bones were labelled I, U. 24. 3; II, U. 25. 12; and IV, Palace; and the remains of sheep, III, U. 33. 2. The oxen (I, II, and IV) came from the North City: II was found under the stairs of a workman's cottage, and IV seems to have been a foundation deposit in the Queen's Palace, being found in a shallow pit trussed for sacrifice. The sheep (III) came from a cornbin in the North Suburb. There was some deposit below the skeleton and it is therefore possible that it may be later, i.e. Roman. The rest are all contemporary with the city, viz. c. 1369–1354 B.C.

The remains are described below under the Roman numerals. The various points of measurement, in the case of the ox skulls, are mainly those of Dr. J. Ulrich Dürst (*Die Rinder von Babylonien, Assyrien und Ägypten und ihr Zusammenhang mit den Rinder der alten Welt*, Berlin, 1899), and comparisons are made with Dürst's material and with material in the Museum of Antiquities, Cairo, which Mr. R. Engelbach kindly permitted me to examine. References are

also given to Dürst's later report on the animal remains from the excavations at Anau, Turkestan (in R. Pumpelly, Explorations in Turkestan, II, 1908, Carnegie Institution of Washington), and to the memoirs of Lortet and Gaillard (La Faune Momifiée de l'ancienne Egypte: Archives du Muséum d'histoire naturelle de Lyon, VIII, 1903; IX, 1907; and X, 1909). In addition to the above, I have compared the oxen material with the remains of sacred oxen found at the Baqaria, near Armant. The latter material is of much later date and has been reported upon in Mond-Myers, The Bucheum, I, Ch. XVII.

# Description of the Specimens

Ox I. U. 24. 3. The remains of this animal consist of an adult skull, pair of lower jaws, humerus, scapula, atlas, and two ribs. The skull is somewhat imperfect, having lost the right nasal bone and the anterior parts of the premaxillae (or intermaxillae): the full length, therefore, cannot be ascertained. It is flat-fronted and without any mesial frontal prominence between the horn-bases, differing, therefore, in this respect from the smaller Baqaria cow skull No. 29. The principal dimensions are given in the table of measurements. A few special features, however, may be mentioned here. The horns are of the half-moon type and extend upwards and outwards and then slightly inwards in a crescentic curve. Each horn-core measures 29 cm. in length along the outer curve: the distance between the tips of the horns is 49 cm. and the greatest distance between the outermost parts is 52.3 cm. The basal circumference of each horn-core is 16·3 cm., and the basal diameters 5·65 × 4·7 cm. Though broken away anteriorly, a small fragment of the premaxilla remains in direct contact with the left nasal, thus agreeing with Baqaria No. 29. The occiput is similar to the latter, but is somewhat flatter. The occipital crest is separated on each side under the horns by the deep notches of the temporal fossae. These infra-cornual notches are 10.9 cm. apart, and the greatest width of the occiput is 17.6 cm., giving an index of 61. The depth from the centre of the occipital crest to the lower border of the foramen magnum is 10.3 cm. The index of the depth to the greatest width is 58.5, and that of the depth to the least (infracornual) width is 94.4. The length of the frontal, from crest to root of nasals, is 20.5 cm.: the greatest (bi-orbital) width is 18.7 cm.; both being slightly greater than in Baqaria No. 29. The upper and lower tooth-rows of this skull agree closely in length with No. 29 and No. 4 from the Baqaria, and the last molars in both lower jaws have small posterior columns.

The associated right humerus of this animal is 29 cm. in full length, the distal condyles are 7.4 cm. in width, and at the middle of the shaft the bone is 3.3 cm. wide. It is somewhat larger than the humeri of Nos. 29 and 32, but slightly less in length than the humerus of No. 4 from the Baqaria. The right scapula is 32.8 cm. in full length; 5.1 cm. diameter of glenoid; and 4.8 cm. diameter of neck: it is larger than Baqaria No. 29, but near No. 32. The full width of the atlas is 12.3 cm., and slightly smaller than Nos. 29 and 32.

Ox II. U. 25. 12. This consists of a skull and lower jaws, axis vertebra, pelvis, humerus, and distal end of the femur—all somewhat imperfect. The skull is flat-fronted, as No. I, with the same type of horns. It is rather imperfect anteriorly and the left horn has been broken off at the base and lost. The right horn-core extends upwards and outwards in an even curve and measures 28 cm. in length along the outer side. The basal circumference is 14.8 cm., and the basal diameters are  $5.15 \times 4.2$  cm. By doubling the distance from the tip of the horn to the centre of the frontal it is estimated that the distance between the tips would be 49.6 cm. The

occiput agrees closely with that of No. I: the least width between the infracornual notches is 10.9 cm., and the greatest width of the occiput is 18 cm., giving an index of 60. As in No. I, the premaxillae are in contact with the nasals. The last upper molars are not fully erupted and the last milk-molars are still in place. The skull, however, is about the same size as No. I, with a full length from the frontal crest (between the horns) to the tip of the premaxillae of 43.1 cm., and a maximum bi-orbital width of 19.3 cm., giving an index of 44 and agreeing with the cow skull No. 4 from the Baqaria. The upper and lower tooth-rows are a little longer than No. I.

The limb-bones of this animal are too imperfect for measurement.

Ox IV. Palace. The remains comprise a skull and lower jaws, scapula, metatarsal, distal end of a femur, and two ribs, belonging to a young animal. The skull is similar in type to Nos. I and II, with horn-cores extending upwards from the frontals and diverging outwards. The tips are 30.2 cm. apart. The length of each core is 10.2 cm.; the basal circumference, 10.2 cm., and basal diameters,  $3.4 \times 2.9$  cm. Though a young skull, the premaxillae reach the nasals. The least (infracornual) width of the occiput is 8.7 cm., and the greatest width 13.75 cm., giving an index of 63. The length of the skull from crest to tip of premaxillae is 31.9 cm., and the greatest width (bi-orbital) is 15.5 cm., the index being 48.5.

The only limb-bone of this animal worthy of notice is a metatarsal measuring 21.4 cm. in length and 2.25 cm. in width at the middle of the shaft. The distal condyles are 5.2 cm. in width.

The above three skulls are smaller than those of long-horned oxen from the Serapeum at Sakkara, described by Lortet and Gaillard under the name of Bos africanus Fitzinger (op. cit., 1903, 1907, and 1909). In the latter, the lengths vary from 46 to 56 cm., and the maximum

Dimensions of Ox Skulls from Tell el-Amarna

	*							I	II (immature)	IV (young)	
		20012-121	-11.20111					cm.	cm.	cm.	
1.	Frontal crest to anterior point of intern	maxill	ae .						43.1	31.9	
	Frontal crest to root of nasals							20.5	20.6	14.8	
3.	Posterior border of horn-core base to p	osterio	or bord	ler of o	rbit			14.6	14.1		
	Least frontal width							14.8	15.4	13.3	
5.	Greatest frontal width (over orbits)							18.7	19-3	15.5	
6.	Frontal crest (between bases of horn-co	ores) .						13.0	15.6	11.3	
7.	Length of nasals						.	15.8	14.4	10.4	
8.	Greatest width of nasals				14			4.6	4.8	3.25	
9.	Frontal crest to lower border of forame	n mag	gnum.					14.4		**	
	Occipital crest to lower border of foran						.	10.3			
	Greatest width of occiput							17.6	18.0	13.75	
12.	Least width of occiput (between infrace	ornual	notch	es) .				10.9	10.9	8.7	
13.	Outer width of occipital condyles							9.1		7.3	
14.	Anterior border of foramen magnum to	anter	ior bo	rder of	intern	naxilla	e.	• •		29.0	
	[22] [23] [23] [24] [25] [25] [25] [25] [25] [25] [25] [25				1.			6.6	7.4	6.0?	
16.	Breadth of palate in front of premolars	,						6.6	6.5	5.3	
	Length of palate							16.6			
18.	Length of three upper molars							7.5	8-4		
19.	Length of three upper premolars							5.1	5.5		
20.	Length of toothless part								12.75	9.7	
21.	Length of lower jaw							34.7	35.1	26.4	
22.	Length of lower molars and premolars							13.0	13.75		
	Length of toothless part			•				9.2	10-3		

widths from 20 to 27 cm. The index of length to width in these ranges from 40 to 48. As already stated, the Amarna skull II is: length, 43·1 cm.; maximum width, 19·3 cm.; index, 44 (as in the Baqaria skull No. 4). The relative proportion is thus very similar.

Compared with four ancient Egyptian skulls of the same long-horned race, described by Dürst under the name of Bos macroceros Dürst (op. cit., 1899), the Amarna skulls are smaller than three of these. A skull of a so-called Apis, with lyre-shaped horns, in the Berlin Museum, is: length, 49.5 cm.; width, 23.2 cm.; index, 46. A skull of another "Apis" with half-moon shaped horns, in Halle and coming from Sakkara, is: length, 51 cm.; width, 24.9 cm.; index, 48. The skull of a sacrificial ox from the tomb of Antef, Prince of Hermonthis, in the Berlin Museum, is: length, 44.5 cm.; width, 20.9 cm.; index, 46. This skull is of interest in possessing a frontal mesial prominence. The fourth skull is that of a small "Apis" with half-moon shaped horns, in the Vienna Museum: length, 38.5 cm.; width, 20.1 cm.; index, 52. This is broad in relation to its length. The Amarna skulls I and II are longer and narrower than the latter. All four of the skulls described by Dürst possess larger horn-cores than Amarna I, II, and IV.

Dürst (op. cit., 1899, pp. 73, &c.) refers to a middle-horned humpless race of oxen as living in Egypt during the time of the Old and New Empire. As representatives of this race he briefly describes a mummified skull of an "Apis" in the Vienna Museum, and more fully that of a young sacrificial bull from the tomb of Mentuhotep, now in the Berlin Museum. The condition of the Vienna skull prevented Dürst from obtaining full measurements, hence no comparisons can be made. The immature condition of the Mentuhotep skull renders it unsuitable for close comparison, but the illustration given by Dürst (op. cit., 1899, Pl. V, Fig. 2) shows some resemblance between it and the Amarna skulls I and II.

In addition to long- and middle-horned Egyptian cattle, Dürst (op. cit., 1899, pp. 76, &c.) describes a series of humped, short-horned cattle of what he calls the Bos brachyceros-race from different countries. These humped cattle are said to have reached Egypt during the New Empire from three sources, viz. Syria, through wars with the Kheta and other peoples, and from Nubia and Somaliland through expeditions to the Land of Punt. Judging from the particulars given by Dürst in the text of his memoir and table of measurements, the Somaliland and Nubian cattle possess larger horns than the Egyptian race (identical with the New Empire form), but all three appear to form a closely allied group in which the index of the length to the width of the skull is 37 (= narrow-faced), and the index of the greatest to the least width of the occiput is 69, 70, and 68 respectively. Another group includes the Syrio-Mesopotamian and Asia Minor oxen, with a frontal length-width index of 41 to 43, and a greatest to least width occipital index of 62 to 65.

In the Amarna skull I the frontal length-width index cannot be obtained, but it would probably be the same as in Amarna skull II, viz. 44. The index for the occiput in I is 61, and in II, 60. In these two indices the Amarna skulls are closely related to the Syrio-Mesopotamian and Asia Minor cattle, though the skulls are a little larger and the horns longer and more robust, as in the examples obtained from the Baqaria, near Armant. Compared with the Somali-

<sup>&</sup>lt;sup>1</sup> Mr. O. H. Myers writes (Mond-Myers, op. cit., p. 139, n. 2): "Most of the known mummies of cattle have at one time or another been described as Apis mummies, but this is extremely improbable seeing that there is none which shows even the same degree of care in mummification as is shown in the mummies of the Mothers of Buchis. It seems probable, therefore, that these are in reality nothing more than mummies of cattle buried ceremonially during the Graeco-Roman period, in the neighbourhood of a sacred cemetery."

land and Nubian group, the Amarna skulls, like those from the Baqaria, disagree in both indices and in their somewhat smaller size of skull and horns.

Sheep III. U. 33. 2. The remains consist of a complete skull, lower jaws, right scapula, right os innominatum, left tibia, and five vertebrae. The scapula measures 19.5 cm. in full length; the glenoid cavity is  $3 \times 2.7$  cm. and the neck, 2.1 cm. in width. The tibia measures 25.7 cm., overall; the distal articulation is 3.3 cm. in width, and the mid-shaft width is 1.8 cm. The innominate bone is 24.9 cm. in full length.

The skull is that of a ram with large curly horns belonging to the group of *Ovis platyura* Wagner, race *aegyptiaca* Fitzinger, as a specimen in the Museum of Antiquities in Cairo, from Tehneh, Middle Egypt.

In their description of sheep remains, Lortet and Gaillard (op. cit., 1907, pp. 87, &c.) remark that among the figures of animals on the monuments of Ancient Egypt two very different forms of sheep can be distinguished. In one the horns are transversely spiral; in the other they

# Dimensions of Sheep Skull and Lower Jaws from Tell el-Amarna

Skull						cm.
1.	Occipital condyles to alveolar point		e.			26.5
	Occipital condyles to frontal crest	8	8		100	12.9
	Maximum width of occiput					9.2
	Minimum width of occiput .					5.75
	Width between horn-bases at frontal	crest				5.2
6.	Minimum frontal width					10.0
7.	Frontal crest to alveolar point .			Ŷ.		23.7
	Frontal crest to tip of nasals .					18.8
	Maximum bi-orbital width				•	13.6
10.	Interorbital width	-	2	2	12	9.9
	Length of intermaxillae		2		2	9.0
	Minimum width across intermaxillae					2.85
	Length of nasals					10.65
	Length of molars and premolars .					6.75
	Width of palate behind molars .	-	0	2		4.9
	Width of palate in front of premolars					3.4
	Width of palate at widest part .			20		5.05
	Length of palate	8	3	8	-	8.4
	Vertical diameter of horn-core base		8	8		5.8
20.	Horizontal diameter of horn-core bas	е.		·	9	4.15
	Length of horn-core along outer curv					30.5
Lower						
	Length from angle to alveolar point					20.2
	Length from condyle to alveolar point	+	•	•	•	21.4
	Height, coronoid to point almost vert		· holo		•	11.0
	Minimum width of upstanding ramus	C. C. C. C. C. C.	pero	w .	•	3.6
			•	•	•	5.5
	Width to angle (diagonal)	•	•	•	•	1.8
	Depth in front of premolars .	•	•	٠	•	4.15
	Depth behind molars	•	•		•	7.1
o.	Length of molars and premolars .	•	•	•	•	1.1
	(There are abscesses below the midd	lle tee	th in	the le	eft jav	w.)
77.77						

are curved in a semicircle, the tips turned to the front. The first form is figured on the most ancient Egyptian monuments, among others on the Predynastic carved slate in the Cairo Museum where it is seen along with the ox and the ass, and on the papyrus of Neb-Qed, in the Louvre Museum. It is quite unknown in a mummified state, but remains attributed to this form have been described from the Predynastic deposit at Tukh, near Negadah. It is known as the "Ram of Mendes" and has been referred to the *Ovis longipes* Fitzinger, race palaeoaegypticus Dürst & Gaillard.

With regard to the second form of Egyptian sheep, Lortet and Gaillard say that the remains of sheep with the "horns of Ammon", the *Ovis platyura* Wagner, race aegyptiaca Fitzinger, have been found in the mummy-pits at Abusir (Graeco-Roman period). It is known from the Twelfth Dynasty and appears on Egyptian monuments of that period: it is frequently figured on those of Saitic times. In a scene reproduced by Wilkinson the head of Sethos I is seen adorned with the horns of this ram. In addition to Abusir, remains of this sheep were obtained from the hypogeum of Sakkara. Three skulls were found by Lefebvre at Tehneh, Middle Egypt, and ten skulls by Garstang near Esna (Graeco-Roman period).

### CHAPTER XV

#### DISTRIBUTION LIST

This list gives the distribution of objects found in the excavations of 1932/3, 1933/4, 1934/5, 1935/6, 1936/7. Those found in 1926/7 and 1931/2 have already been included in City of Akkenaten, II. The present 1933/4 list includes the objects from the Sculptor's House O. 47. 16a and 20 which was excavated in that season but has not yet been published.

#### GREAT BRITAIN

Birmingham Museum and Art Gallery. 32/11, 19, 142, 144, 169, 224.

Cambridge, Museum of Archaeology and Ethnology. **32**/168, 173. **33**/39, 83, 120, 146, 200 a, 211 a, 239 b, 256, 295, 330, 399. **34**/6, 28, 49, 242.

CAMBRIDGE, FITZWILLIAM MUSEUM. 32/14, 20, 22, 28, 31, 40, 48, 57, 165, 267. 36/22, 168, 183.

Cambridge, Museum of Classical Archaeology. **35**/150, 180, 190, 221, 222, 239, 273, 289 b, 305 f, 310 d, 324, 349 d, 382, 415, 492.

Canford School Museum. **32**/25, 102, 106, 270, 273. **33**/22, 27, 139, 196, 206, 242, 246, 264, 267. **34**/48 c.

East Anglia, Egyptian Society. **32**/34, 194, 229, 255, 266. **33**/5, 38, 50, 63, 74, 84, 97, 117, 136, 137, 168, 177, 212, 244, 266, 287, 311, 313, 324, 333. **34**/2, 36, 47, 64, 115 d, 164, 176. **35**/55, 140, 161, 229, 232 b, 250, 271, 306, 345 b, 378, 400, 425, 439, 489 c.

ETON COLLEGE MUSEUM. 34/133, 196.

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LONDON, MERCHANT TAYLORS' SCHOOL MUSEUM. 32/18, 30 k, 143, 145, 151, 240, 269.

London, Stepney Museum, Whitechapel. 33/89, 185, 211 c.

London, University College. **34**/70, 76, 83, 90, 113, 123 B, 131, 140. **36**/21, 57, 61, 111, 129, 148, 153, 159, 163, 175, 191.

LONDON, WELLCOME HISTORICAL MEDICAL MUSEUM. 35/37, 100, 200, 236, 265, 298.

Manchester Museum. 32/103, 122, 123, 161, 264. 33/30, 150, 297, 304, 312, 321. 34/23 a, 24, 28, 46, 100, 155, 165, 170, 189, 193, 199. 35/22, 64 a, 81, 93, 183, 195, 308, 316 B, 414, 464, 479, 483, 485, 519. 36/27.

Oxford Ashmolean Museum. 32/12, 16 b, 82, 99, 117, 161 b, 162, 188, 238. 33/33, 43, 75, 85, 86, 87, 101, 131, 144, 165, 244, 293, 306. 34/28, 57 b, 60, 112 b, 118 a, 120, 153, 163, 187, 200, 205, 212. 35/2, 48, 68, 147, 304, 312, 338, 396,

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Saint Paul's School Museum. **32**/30 j, 167, 183, 220, 224. Stowe School Museum. **32**/30 a, 118, 172, 175, 256.

Winchester College Museum. 32/154, 186, 230, 245, 260 A, 263. 34/18 B, 50, 128 B, 217.

#### BRITISH EMPIRE

CANADA, ROYAL ONTARIO MUSEUM OF ARCHAEOLOGY, TORONTO. 32/116, 149, 166, 206, 274.

NEW ZEALAND, AUCKLAND MUSEUM. 32/129, 135.

New Zealand, Otago University Museum. 33/8, 35, 70 a, 77, 121, 132, 147, 154, 163, 209, 221, 247, 294, 317. 34/2 b, 107. 35/84 c, 92, 128, 149, 186, 215, 268, 309 a, 317, 331, 334, 352, 363, 369, 420, 489, 551. 36/48, 89.

#### UNITED STATES OF AMERICA

Boston Museum of Art. **34**/27, 28, 31, 62, 65, 66, 69, 87, 106, 147, 186, 198, 202, 237, 238, 248. **35**/51, 65, 72, 158, 254, 259, 264, 280, 309 d, 345 a, 434, 440, 462, 530. **36**/23, 38, 52, 107.

New York, Brooklyn Museum. **32**/16, 18, 61, 78, 93, 240. **33**/6, 142, 148, 156, 199, 200, 222, 228, 258, 262, 286, 288 c, 290, 335. **34**/28, 39, 45 a, 50 a, 92, 99, 108, 126, 167, 183, 218, 240, 246. **35**/1, 15, 163, 237, 373 a, 411, 412, 474, 487, 507, 513, 535, 558, 560, 567. **36**/20, 24, 39, 53, 54, 60, 109, 166, 172, 176, 180, 188.

New York, Metropolitan Museum. 32/163, 204, 257. 34/98, 128 a, 129, 157, 188.

San Diego Museum. **32**/29, 63 a, 88, 164, 182, 184, 214. **33**/15, 19, 30, 54, 57, 68, 116, 161, 244, 276, 278, 299, 322. **34**/19, 28, 38, 60, 68, 78, 86 d, 96, 104, 115, 192 a, 203, 206, 208. **35**/45, 79, 94, 145, 160, 178, 179 a, 261, 279, 323, 330, 350, 355, 416, 516, 556. **36**/16, 59, 63, 112, 161, 182.

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Brussels, Foundation Egyptologique Reine Elisabeth. 34/28, 63, 124, 130, 141, 172, 213. 36/8, 103.

COPENHAGEN, NY CARLSBERG GLYPTOTEK. 32/6, 16 E, 33, 77, 95, 96, 105, 126 B, 130, 198, 232, 234, 240 B, 254, 276.

#### EGYPT

CAIRO, THE AGRICULTURAL MUSEUM. 32/268.

Cairo, The Egyptian Museum. 32/7, 23, 38, 53, 59, 65, 75, 76, 80, 81, 83, 84, 85, 86, 87, 90, 94, 97, 100, 111, 114, 126 c, 128, 131, 133, 135, 141, 147, 156, 157, 158, 185, 187, 189, 190, 192, 193, 199, 203, 205, 213, 215, 222, 223, 233, 235, 240 g, 246, 249, 250, 251, 252, 254 a, 265, 278, 279, 280, 281, 33/1, 7, 9, 10, 19, 23, 25, 26, 28, 32, 40, 43, 45, 48, 51, 56, 60, 62, 64, 69, 75, 80, 88, 90, 92, 93, 95, 103, 109, 111, 114, 119, 123, 128, 138, 149, 153, 155, 157, 159, 160, 162, 164, 181, 184, 187, 194, 195, 203, 207, 225, 227, 231, 235, 237, 238, 239, 244, 245, 249 B, 250, 251, 254, 257, 259, 270, 272, 274, 275, 277, 279, 282, 283, 288, 291, 296, 297, 299, 300, 304, 310, 318, 328, 334, 34/3, 4, 6, 8, 10, 12, 13, 21, 22, 25, 28, 29, 32, 35, 42, 48, 50, 53, 57, 58, 59, 60, 71, 72, 73, 74, 80, 84, 86 a, 89, 91, 101, 102, 106, 109, 111, 112, 115,

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In addition to this the above museums have received many fragments of faience of types from moulds, pottery, and carved stone which did not receive index numbers. Cairo and the Ashmolean Museum, Oxford, have also had pieces of fresco.

The registration numbers in these museums are preserved at the Egypt Exploration Society.

# GENERAL INDEX

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nnšm, "spleen", 173 (13c).
nhh, "oil", 175.
nkwt, "notched sycomore figs", 172,
175, 176.

Rmnyt, "domain", 166, 167.

Hsyt nfr, irp n, "wine for merry-making", 163.

Hwt, abbreviation of T:-hwt-p:-Itn, on mud bricks, 86, 100, 150, 181. hb, "festival".

- swt-[ib], 174.

--(n)hh, 174.

-dt, 174.

hnkt, "beer".

- rm3, 164.

- smht rswt, 164.

hnkw, "donated lands", 173 (217a). hdr, unknown product, 173 (12).

H: tpy, "primeval one", epithet of the Aten, 169.
h:b, "neck", 173 (9e; cf. 217).
h:b, kind of cloth, 173 (12).
h:n, kind of meat, 173 (217c; cf. 9e).
H:pšyt, place name, as source of wine, 166.

Hnm, "basin", 166.

hrr, meaning unknown, 161.

Si-whit, village of Mut, Dakhleh Oasis, 166.

swilt, kind of meat, 173 (217c).

spr drww, "ribs of the side", 173 (9d; 217).

sfhy, "fortress", 202 n. 3.

sntr, "incense", 175.

srt, "geese", 173 (183).

srmt, unidentified product, 175.

Shtp Itn, epithet of Akhenaten, 147, 198.

— house of, 148, 198-9.

— regiment of, 188, 198. Shtp-Re, see Shtp-Itn. shn n drww, kind of meat, 173 (217e). shb, uncertain meaning, 169. st, "bureau", 162. stf, "liquid" (of honey), 175. sd, "tail", 173 (9j).

Šrw, uncertain meaning, 161.
šwyw, "rushes" (?), 161.
Šwt-R<sup>c</sup>, "sunshade", special kind of temple, 200-8.
occasional synonym of hwt-ntr, 202.
šbt, "dregs" (?), 176.
šnc, "ergastulum", 172.
šnc, "breast", 173 (13a).
šnty (šndt), "acacia", 176.
šrr, unknown liquid, 173 (12).
šdh, "pomegranate wine", 149, 164.

Kit, "breast", 172 (9); 173 (10; 217). Kit, place name, source of wine, 166. kmi, "gum", 175. kd, "gypsum", 161; cf. 180, 181.

Ki-n-rnh-R<sup>r</sup>, name of block of magazines, 211-12.

kimy, "vine-dresser", 168, 180.
hri kimyw, "master of the vine-dressers", 168, 179.

kimw, "vineyard", 167.

— hri kimw, "master of the vineyard", 168, 180.

Kmyt, name of a lost literary work, 162.

G:bw, "leaf" (?), 176. gmgm, "viscous" (of honey), 175. gnn, "suet" (?), 174. ggt, "kidneys" (?), 173 (13d).

 $\underline{T}$ rrw, "Selle", source of wine, 165.  $\underline{T}$ hn- $\overline{I}$ tn, epithet of Amenophis III, 200.

— house of, 148, 164, 200.
st psd, "vertebrae of the back", 173
(9i).

 $\underline{D}r$ , d-r, "preserved (meat)", 169, 170 (see iwf dr).

 $\underline{\underline{D}}$ nh n  $\underline{d}$ rww, "wing-rib" (?), 173 (9f).  $\underline{\underline{d}}$ r $\underline{d}$ rw, uncertain meaning, 173 (12).

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